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SATURDAY, OCTOBER 4, 1873.

ORIGINAL COMMUNICATIONS.

APHONIA.

BY ANDREW H. SMITH, M.D.,

Surgeon to the Throat Department of the Manhattan Eye and Ear Hospital, N.Y.

IN order to the production of a laryngeal sound, two things are necessary,—the passage of a sufficiently forcible current of air through the larynx, and a due approximation and tension of the vocal cords. The first of these conditions is supplied by the action of the chest, and is absent only when there is extreme feebleness of the expiratory muscles, or when the air escapes from the trachea below the larynx, as in tracheotomy. The second condition is much more complex, and may be interfered with in a variety of ways.

The causes of this interference and of the resulting aphonia or loss of laryngeal voice may be divided into those which act mechanically upon the larynx itself, and those which produce paralysis of the muscles of phonation.

When aphonia is due to one of the first class of causes, there exists some departure from the normal condition of the larynx, which presents a mechanical obstacle to the proper approximation and vibration of the cords. The diseased conditions which produce this effect are numerous and varied.

The most frequent is congestion of the larynx from cold. This acts in two ways: first, when the mucous membrane of the cords themselves is swollen, in which case their vibration is interfered with; and secondly, when there is tumefaction of the inter-arytenoid fold, which prevents the approximation of the arytenoid cartilages and consequently of the cords. Tumefaction of the ventricular bands also—which lie just above and parallel to the vocal cords—may cause pressure upon the latter and prevent their vibration. This is not unfrequently the case in acute laryngitis.

Another very frequent cause of aphonia is ulceration attacking either the cords or some other of the movable portions of the larynx. Ulceration of the cords alone in order to produce complete aphonia must be quite extensive. There must be sufficient loss of substance to leave a considerable opening when the cords are approximated to their fullest extent. A less degree will produce hoarseness only. But it generally happens that the same affection which has led to ulceration of the cords has involved other portions of the larynx at the same time, inducing, if not ulceration, at least tumefaction of the mucous membrane. A favorite seat for ulceration is the inter-arytenoid fold already mentioned, where it effectually prevents the folding of the membrane which takes place when the arytenoid cartilages approach each other. This results not only from the tumefaction of the membrane, but from the pain which is felt whenever the ulcer is thus folded upon itself. But the tendency to

aphonia in these cases does not cease when the ulcers themselves have disappeared. In many cases these latter have left behind them an obstacle to phonation quite as formidable as they themselves constituted, in the stiff, contracted, and unyielding cicatrix. Ulcers situated at the anterior extremity of the chink of the glottis and affecting both cords are almost certain on healing to cause adhesion of their edges, analogous to the growing together of the fingers when the skin between them is destroyed by a burn. Situated posteriorly, these cicatrices may drag one or other of the cords out of its natural plane, so that when it approaches the median line it will be above or below its fellow, thus rendering phonation impossible.

Growths of various kinds within the larynx may also be so situated as to prevent a proper approach of the cords. These growths, most frequently polypi or papillomata, are often seated upon the free edge of a cord. In other instances they are just below or just above the cord, near enough to interfere with its action. At other times one of the arytenoid cartilages is the seat of the growth, which impinges against the cartilage of the opposite side before the cords come in contact. In a case which presented itself to me a few weeks ago in the throat clinic at the Manhattan Eye and Ear Hospital, the right capitulum Santorini had assumed the form of a large cuboidal mass, which occupied nearly the whole of the inter-arytenoid space. In this case there had been complete aphonia for a number of years.

Aphonia is also one of the characteristics of that formidable disease—œdema of the glottis. This is in reality a misnomer, for the œdema is not of the glottis, but situated at a considerable distance above it, in the ary-epiglottidean folds. These loose folds of mucous membrane become enormously distended by effused serum, forming large tumors not very unlike sessile mucous polypi. These fall together in the median line, obstructing the ingress of air into the larynx, and of course at the same time destroying the laryngeal character of the voice.

Cases sometimes occur in which ankylosis of the crico-arytenoid articulation prevents the movement of the arytenoid cartilage, rendering impossible a proper approximation of the cords.

Such are the chief causes which, acting upon the larynx itself, present a mechanical obstacle to the formation of the voice.

The treatment of this mechanical form of aphonia is as various as the cause; but in all cases it has for its object the removal of the obstacle to the necessary closure of the glottis.

Simple tumefaction of the mucous membrane from acute or subacute inflammation may be treated by astringent applications with a brush or sponge. Of these the sulphates of copper and zinc, alum, and the perchloride and the sulphate of iron, are especially useful applied in solution. The nitrate of silver has the disadvantage of causing excessive spasm, and, as in most cases equally good effects can be obtained with other applications not open to this objection, it would be better if its use were

reserved for exceptional cases. In the form of spray, however, it is more easily borne, and often produces excellent results. It requires to be used in a very strong solution, sometimes as high as 240 grains to the ounce, and should be thrown directly upon the part.

Much benefit is often derived in these cases from the inhalation of steam containing some soothing medicament. A favorite prescription of Dr. Mackenzie, of London, and one which I have found of great service, is the compound tincture of benzoin. A teaspoonful of this is put into a pint of hot water in a narrow-mouthed pitcher, and the steam is inhaled as long as it continues to come off. When the inflammation is of a more chronic character, inhalations of the stimulating essential oils may be resorted to with benefit. Non-volatile substances, stimulant or astringent, may be nebulized by means of the steam or air atomizers now in such general use.

When the brush is used, I think it well to have the solutions made with glycerin, inasmuch as from its adhesive quality it remains longer in contact with the part, while at the same time its affinity for water makes it a valuable local depletant.

When the inflammation results in œdema of the larynx, scarification after the manner first brought into use by Dr. Buck is the only measure which offers any certainty of relief. As originally performed by Dr. Buck, the operation consists in carrying a curved knife down to the seat of the œdema, using the index finger of the left hand as a guide, and making several scarifications so as to afford a free exit for the serum. Since the introduction of the laryngoscope the mirror has been used to guide the instrument.

Various instruments have also been devised having concealed blades, which are designed to facilitate the operation and render it safer.

The following case illustrates so well the nature of the affection, and also the result of this treatment, that, although the aphonia was a subordinate element in the case, the reader will pardon a momentary digression in relating it.

James Keegan, Ireland, æt. 32, soldier, during the winter of 1861-62 was under my care while lying in camp opposite Washington. He had for months been the subject of syphilitic inflammation of the larynx, and his condition was such that I anticipated the occurrence of œdema at any time when he should be subjected to unusual exposure. One night I was awakened by a strange crowing sound outside my tent, accompanied by a shuffling of feet, and in a moment two men entered, supporting Keegan between them. On striking a light I found him unable to stand alone, his face livid, inspiration exceedingly difficult and accompanied by a loud whoop. He could whisper a few words at a time, but his mind appeared to be wandering. The examination of the throat with the finger was very much facilitated by the frequent manipulations to which it had been subjected in previous treatment. He had acquired the power of opening the mouth to an extent which permitted the introduction of a part of the hand as well as the finger, and the

throat had become so accustomed to the contact of foreign bodies that it could bear any amount of touching without exciting reflex action. These conditions made it very easy to carry the finger down to the larynx and thoroughly examine the parts. The ary-epiglottic folds were found to be enormously distended with serum, the tumors being of the size and shape of small chestnuts. I took a long curved sharp-pointed bistoury and covered the blade with adhesive plaster to within half an inch of the point. Then, using the left index finger as a guide, I had no difficulty in making several thrusts into the œdematous mass. This was followed by the expectoration of a little blood mixed with saliva and serum. The dyspnœa very soon became less urgent, and within an hour the patient was entirely relieved. A few days afterwards the army was transferred to the Peninsula, and Keegan was sent to a general hospital, together with a statement of his case. Soon after I received a piteous letter from him, begging to be returned to the regiment, stating that he had had two attacks of choking less severe than the first one, and that the doctors at the hospital did not know how to relieve him. He added that he was certain he should choke to death sometime if I did not have him returned to my care. This was of course impossible, and a month later I had the pain of learning that poor Keegan's prediction had been accurately fulfilled, he having suffocated in another attack of œdema.

The aphonia which results from loss of substance of the vocal cords is irremediable, but still it sometimes happens that approximation will finally be effected more or less perfectly by a modification of the natural movements of the parts, so that the aphonia will be remedied to a considerable extent.

When the mobility of the cords is restricted by adhesions or by the contraction of cicatrices, the parts may be divided by a cutting operation; but the tendency to heal again in the same way is such as to leave little prospect of ultimate success.

Morbid growths, if not of a malignant character, may generally be removed by evulsion, excision, caustics, or the galvanic cautery. Mucous polypi and papillomata are most readily removed by evulsion with the forceps. A great variety of instruments have been devised for this purpose, which the limits of this paper will not permit me to describe. Harder growths require cutting instruments or the use of caustics or the galvanic cautery. If pedunculated, they may sometimes be removed by means of the laryngeal écraseur.

There is another form of organic aphonia, in which there is no change of form in any of the parts of the larynx, but a paralysis of one or more of the muscles of phonation, owing either to a diseased condition of the muscle itself or to a lesion of the nerves or nerve-centres with which it is related.

The muscles of the larynx are liable to become infiltrated with the products of inflammation; the inflammation arising either in the muscle itself, or, as is more frequently the case, having its origin in the contiguous mucous membrane.

The thyro-arytenoids, lying as they do within a

fold of mucous membrane, we should expect would be more likely to be affected as the result of mucous inflammation than the other muscles of phonation, which are separated by intervening cartilage from any mucous surface; and I have within the present week seen a case of acute laryngitis in which these muscles were paralyzed, causing complete aphonia.

The paralysis of the muscle in such cases will usually disappear as the effused material is absorbed. In some cases, however, this condition is followed by fatty atrophy of the muscular fibre, in which case the paralysis is of course permanent. In other cases a purely functional paralysis remains for some time after the inflammation has disappeared, as will be noticed more fully in another connection.

Paralysis of the muscles may also result from syphilis, diphtheria, lead- or arsenic-poisoning, etc.

The larynx seems, moreover, to be peculiarly susceptible to the influence of irritation in distant parts in which its nerves are not directly implicated, or, in other words, to reflex paralysis, just as we find paraplegia resulting from stricture of the urethra or from the irritation of worms in the alimentary canal. So we may find paralysis of one or more of the laryngeal muscles dependent upon irritation of the abdominal or pelvic viscera. In fact, there is a form of aphonia which derives its appellation from its frequent association with derangements of the uterine function, viz., hysterical aphonia.

But a very frequent source of these paralyses is to be found in an interference with the nervous supply from some cause external to the larynx. This may be a growth pressing upon the recurrent nerve, or the irritation of this nerve, produced by tubercular deposit in the apex of the lung, especially the right.

Again, the paralysis may be caused by disease in the medulla at the origin of the pneumogastric nerve, in which case it will be associated with paralysis of other parts.

There is also another form of paralysis which has no appreciable lesion whatever to account for it, and which gives rise to what is known as functional aphonia.

Whatever the source of the paralysis, aphonia, more or less complete, will be the result whenever the vocal cords cannot be brought together and the proper degree of tension maintained.

The muscles of the larynx may be affected singly or in pairs, and thus we have unilateral and bilateral paralysis of the adductors.

Unilateral paralysis of the adductors is very generally due to some cause located outside of the larynx and affecting the recurrent nerve. This may be a tumor in the track of the nerve, as an aneurism, a goitre, a malignant growth, etc. When this condition occurs on the *left* side, it at once excites suspicion of aneurism of the arch of the aorta at the point where the left recurrent nerve is looped around the vessel.

Occurring on the right side, it is often attributable, according to Mandl, to irritation of the recurrent nerve by the pressure of tubercle in the apex of the lung, the nerve on the right side being in close relation to the pleura. He found the voice affected in fifty out of fifty-two cases in which the right apex

alone was diseased, and in only one out of thirty-two involving the left.

Mackenzie's experience, however, goes to disprove this theory. He found that of seven cases of paralysis of one cord in phthisical subjects six were on the left side.

The poison of lead or arsenic, and also of syphilis and diphtheria, may be confined in its action to one side of the larynx, though its effect is more likely to be symmetrical. The same may be said of disease at the origin of the pneumogastric nerve.

In unilateral paralysis the laryngoscopic appearances are striking and characteristic. When phonation is attempted, one cord is seen to advance to the median line, or perhaps beyond it, while the other remains stationary. Very commonly the paralyzed cord is somewhat congested.

Aphonia does not always result from paralysis of one cord, as the other sometimes moves far enough beyond the median line to meet its paralyzed fellow.

(To be continued.)

THE EXTERNAL EAR A SYNTHETIC RESONATOR.

BY CHARLES H. BURNETT, M.D.,

Aural Surgeon to the Presbyterian Hospital in Philadelphia.

THE auricle, or ear of common language, has usually received but little attention from physiologists. In most cases it is passed by with the vague statement that it serves "to collect sound," or that it exercises "little or no influence upon hearing." The external ear does indeed collect sound, for its function is that of a *synthetic resonator*. It therefore exercises great influence upon hearing, since it insures the proper reception by the auditory nerve of the partial tones composing many sounds produced both by nature and by art.

Before any further explanation of the functions of the auricle, let us briefly consider the acoustic nature of some of the ordinary sounds which are received by it. It is well known that every sound is composed of a collection of "partial tones" or "over-tones" which determine its timbre or clang-tint. Any one of the ordinary sounds of nature, as, for example, the roar of a cataract or of the surf, and the rustling of the leaves in a forest, is composed of a large number of partial tones, which, for the sake of simplicity, let us call deep, intermediate, and high partial tones.

The ordinary normal ear does not isolate any of the partial tones of a composite sound, but perceives them as a whole.

This is due to the fact that certain parts of the auricle resound best to the high partial tones, while other portions of it resound best to the intermediate and low partial tones, thus insuring the complete reception by the auditory nerve of all the partial tones which compose any given sound falling on the auricle. I have discovered by experiments upon my own ear that the region of the helix and its fossa resound to the deeper notes, the antihelix and its fossa to the intermediate notes, and that the concha,

"the deep concavity within the position of the antihelix, presenting a semi-spiral course towards the entrance of the auditory meatus," resounds best to the high partial tones. In order to prove this it is necessary to be in the presence of a sound possessing the characteristics of those already mentioned. By pressing the auricle at its outer edge gently forward, the sound instantly becomes a deeper one, from the augmentation of the resonance for deep tones thus gained by the helix and its fossa.

The deep tones, however, are immediately weakened or lost by placing the finger upon the helix and pressing it firmly against the head. Then we find that the sound becomes one in which the intermediate and higher partial tones are prominent. By pressure upon the antihelix the intermediate tones become weaker, and the higher partial tones are most distinctly perceived, on account of their undisturbed resonance in the concha. Firm pressure upon the helix, antihelix, and concha will interfere with the resonance of all but the highest partial tones. In the latter instance the resonance of the meatus auditorius externus most probably has full scope, for this part of the ear, according to Helmholtz, resounds best to notes of the fourth octave ($e^{iv}-g^{iv}$). Therefore, if any one of these portions of the auricle has its acoustic functions altered, either by disease or artificially, the tones to which it resounds will be weakened or lost, and the prominence of the other partial tones will change the timbre of the original sound.

Experiment will show that by giving prominence to a certain portion of the auricle, viz., the helix and its fossa, a sound may be rendered fuller, and hence louder, from the increased resonance of the deeper notes which enter into its composition. This may explain the asserted increase of hearing in some cases of othæmatoma, when the swelling may have rendered these particular parts prominent and thus have increased their resonating power. But if the disease advances and produces swelling and rigidity of the entire auricle, as it usually does, we can also readily understand the cause of impairment in hearing in these cases.

A man without an auricle can indeed hear sounds, but they are altogether different, acoustically considered, from the complete sounds as heard by the possessor of the normal auricle. In the former case, a large number of the partial tones being lost, the clang-tint of the sound is altered; whereas, in the latter case, when the auricle receives and conveys synthetically all the partial tones to the auditory nerve, the timbre of the composite sound is fully perceived.

NOTE ON A SOLUTION OF IODOFORM.

BY LOUIS ELSBERG, M.D.,

Professor of Laryngology and Diseases of the Throat in the University of New York.

A GREAT objection to the employment of iodoform ($C_2H_3I_3$) in substance is its bad odor, which is very penetrating and persistent; furthermore, there has not hitherto been in use any effect-

ive solution for topical applications in cases where ointments are inapplicable. It will doubtless be of interest to all who know the medicinal value of iodoform to learn that both these objections have been overcome. I have found an ethereal solution which deodorizes iodoform, the solution smelling of ether only, and at the same time constitutes an effective topical remedy for diseased mucous membranes, as of the throat, nose, mouth, larynx, vagina, rectum, etc. Rhighini used an ethereal solution for direct inhalation, and Dr. Sass used an ethereal solution and also a mixture of iodoform and sweet-almond oil by means of a spray-producer for inhalation. Dr. Gubler requested Messrs. Odin and Leymarie to ascertain the relative proportions in which iodoform is soluble in ether, and the most favorable conditions for its preparation; their experiments and conclusions are published in the *Pharmaceutical Journal*, August 2, 1873. The *London Doctor* for September 1 tells us that experiments were made with pure ether of 65° Baumé (specific gravity .724), and also with ether of 62° Baumé and 56° Baumé, the temperature being 13° C. Eight grains of tincture obtained with these ethers contained iodoform in solution, respectively, to the following extent:

Ether of 65° Baumé, 1.61 grammes.

" 62° " 1.26 "

" 56° " 1.13 "

The conclusions drawn by the authors from their experiments are,—

1. To employ iodoform in the crystalline state.
2. To make the solution in a red glass flask by simple agitation.
3. To use the following proportions:

Crystallized iodoform, 1 gramme;

Ether (60° Baumé), 4 grammes.

I had a solution prepared with Squibb's ether, and find that it possesses all the advantages of iodoform in powder for local applications, without its disadvantages. The smarting which the ether may be expected to produce upon the mucous membrane is momentary only, so that the application becomes really painless. Its beneficial effects surpass my expectations.

NOTES OF HOSPITAL PRACTICE.

JEFFERSON MEDICAL COLLEGE.

CLINIC OF PROF. S. D. GROSS, M.D.

Reported by J. B. ROBERTS.

MYOTOMY IN A CASE OF TORTICOLLIS.

A. M., æt. 7, comes before us with wry neck, caused by contraction and rigidity of the right sternomastoid muscle. The head is bent to the right and the face turned to the left, which, from the insertion of this muscle behind the axis of rotation of the head, must always be the result of any shortening of its fibres.

The mother states that the child was born with her head in this distorted condition; but, as cases of congenital torticollis are unusual, we do not receive this statement implicitly.

A strong tense cord is seen extending along the neck,

holding the head firmly in its abnormal position. This is the border of the contracted and indurated muscle, as can be readily proved by tracing it out with the finger.

In this case the employment of extending apparatus for the purpose of remedying the deformity would be of no avail; the only treatment at all practicable is myotomy, or division of the contracted muscular fibres. This operation, as in tenotomy for the cure of club-foot, is done subcutaneously, in order that the air may be excluded and the supervention of a high grade of inflammation prevented. The head of the patient is held by an assistant in that position which will place the muscle on the stretch and make it stand out prominently above the other cervical structures. A delicate knife or tenotome is then introduced at the outer border of the muscle, some distance above its origin, and passed flatwise under it; when the instrument has been carried across, the cutting edge is turned up against the belly of the muscle, which is severed by a sort of sawing motion. Inasmuch as the sterno-mastoid is in relation with important vessels and nerves, the surgeon must be on his guard lest he wound them. With ordinary care, however, he can perform this operation without any danger to these structures.

The rigid fibres, as soon as they have been cut, spring apart, leaving an interval between the ends. Into this space lymph will be poured out, and will finally become converted into analogous tissue, constituting between the two sections of muscle a firm uniting band.

The puncture in the integument shall be covered with adhesive plaster, but there is no subsequent treatment required except rest for a few days in bed. Occasionally it is necessary to use some mechanical contrivance after the operation to keep the head straight until the divided muscle reunites; but here we shall dispense with it, unless we find that from habit the girl continues to carry her head so to one side as to endanger the success of the operation.

LITHOTOMY IN A CHILD THREE YEARS OF AGE

This boy, aged 3 years, has been suffering from symptoms of vesical calculus for the past year, and when he presented himself at the clinic a few days ago had severe neuralgic pains in the bladder; but this trouble has been relieved by the administration of quinine and anodynes.

Upon sounding I readily detect a stone, and shall accordingly proceed to extract it by the lateral operation devised by Cheselden, which method I consider preferable to all others. Before the performance of lithotomy, it is necessary that the patient's rectum be unloaded, so that the bowel may not be wounded by the incision; and it is also important that the bladder contain six or eight ounces of water, to distend and so protect its walls, and to facilitate the removal of the calculus.

Having placed the patient on his back, with the breech brought to the edge of the table, I introduce the staff, which, inclined a little to the right if I cut on the left side, is hooked well up under the symphysis of the pubes, and held firmly by an assistant. In the operation an incision is made through the skin, superficial fascia, and some fibres of the levator ani, and then the transverse perineal muscle, the triangular ligament, the membranous urethra, the prostate gland, and the neck of the bladder are successively divided. The external incision is begun at the raphe, an inch and a quarter above the anus, and extends obliquely to the left, about midway between the rectum and the tuberosity of the ischium, for a distance of two and a half to three inches.

In this child so large an incision is unnecessary, and I shall accordingly make it about an inch and a half in length. Placing my finger in the wound for a guide,

I cut through the tissues mentioned down to the membranous urethra, where I can feel the groove in the staff. After dividing this portion of the urethra I should, in ordinary cases, place the point of the knife in the groove, and push it onward, cutting through the prostate gland and the neck of the bladder; but here I shall merely nick the prostate, and then lacerate it with my finger, so as to have as little hemorrhage as possible, and to lessen the chances of injuring the pelvic fascia. When about to make this cut, I push the rectum to the right with my finger, which has been in the wound all the time, to preclude any chance of injuring the intestine by my knife.

The transverse perineal artery is necessarily divided, but the hemorrhage can be readily controlled. Division of the artery of the bulb, however, is, from the great difficulty experienced in ligating that vessel, a serious complication, which should be carefully avoided.

As soon as the bladder is opened, the urine is expelled with a gush, which generally forces the stone down to the opening, so that it can be seized with the forceps and extracted by gentle traction and rotation. Occasionally the stone gets up behind the pubic symphysis, and can only be dislodged by external pressure over the hypogastrium; at other times, especially when enlargement of the prostate exists, it falls into the cul-de-sac behind that gland, and its seizure is rendered quite difficult.

In this instance the calculus is small, and so soft that it crumbles under the pressure of the forceps; but by using the lithotomy scoop, and washing the bladder out with water from a syringe, I succeed in removing all the particles.

After this operation the urine is usually retained for several hours, when, having accumulated to some extent, it pushes away the clots and forces its way out from the wound with a gush; but its flow is soon checked by the swelling of the parts, and it is compelled to escape by the urethra. In a day or so, however, the tumefaction subsides sufficiently to allow it to pass from the perineal incision, which is its course until the thirteenth or fourteenth day, when it again escapes by the natural channel.

The after-treatment is very simple, and consists in locking up the bowels for several days, and placing the patient on the antiphlogistic regimen.

It is exceedingly uncommon to have union by the first intention after lithotomy, but it does occasionally happen, as is shown by a case that occurred in the practice of Dr. S. W. Gross, where the wound cicatrized without the supervention of the granulating process.

PENNSYLVANIA HOSPITAL.

SERVICE OF DR. R. J. LEVIS.

Reported by JOHN B. ROBERTS.

PIROGOFF AMPUTATION AT THE ANKLE—USE OF CARBOLIZED CATGUT LIGATURES.

A MAN was brought to the hospital with his right foot crushed up to near the ankle-joint by the passage of a railroad-train over it. The whole anterior portion of the foot was so mashed that there was no resort but amputation; the only question was as to how much should be removed.

In the surgery of the hand and foot, conservation of the parts should always be an object of the operator, that he may save to the patient all possible utility of the member. The injury here, however, was too extensive to admit of either the tarso-metatarsal (Lisfranc) or the medio-tarsal (Chopart) operation, and therefore the choice was between the tibio-tarsal operations after the

methods of Pirogoff and Syme. The method of Pirogoff, which is a sort of osteoplastic operation, leaves the posterior part of the calcaneum in the flap, to be finally brought into apposition with the lower end of the tibia.

In order to save blood, the tourniquet was applied, not upon the femoral artery in Scarpa's triangle, but near to the injury, so that as little as possible of the limb might be congested by the pressure. An incision was made from the internal malleolus directly around the sole of the foot to the external malleolus, dividing the tissues down to the bone. After the tissues had been pressed backwards as much as possible, the calcaneum was sawed in a direction obliquely upwards and backwards, so that the saw traversed the bone posteriorly to the process called the sustentaculum tali.

Dr. Levis prefers to saw the bone thus, before making the anterior flap and disarticulating the astragalus, because it is firmly held by ligamentous attachments and the saw can be directed with greater accuracy.

The next procedure was to make a slightly-curved dorsal incision, which, beginning at the same point as the plantar, passed across the foot half an inch below the line of the ankle-joint, ending at the external malleolus. Then the joint was entered, the ligaments holding the astragalus to the bones of the leg divided, and the whole of the foot except the heel removed.

Great care was exercised to avoid injuring the posterior tibial artery, for if it had been pierced the flap containing the calcaneum would probably have sloughed. This unfortunate complication can be avoided in most cases by the exercise of caution; though occasionally the extent of injury necessitates the division of the vessel in order to get behind the crushed and lacerated tissues.

After the flaps had been made, a very thin section of the articulating surfaces of the tibia and fibula was sawed off, and the calcaneum brought up into apposition with the freshened bony surface. As there was too much strain upon the flaps, a thin piece was shaved off the tibia a little more obliquely, until the parts came together accurately and without tension.

In arresting hemorrhage, carbolized catgut ligatures were used, as they can be cut off short and left permanently enclosed in the wound; for their animal composition and their antiseptic properties render their presence tolerable to the tissues. These ligatures are made by soaking catgut in a solution consisting of one part of carbolic acid and four parts of olive oil, and are kept immersed until required, that they may be pliable when used. They are preferable to ordinary silk ligatures, which act as setons, preventing the healing of the wound until they are loosened by ulceration. Carbolized catgut is also recommended in ligation of arteries in continuity, because the superficial incisions may be immediately closed, so that immediate union can take place before the artery is cut through by the ligature; then, if a firm clot have not formed, secondary hemorrhage will probably be prevented, and nothing more than a sort of temporary false aneurism result.

The parts were brought together by sutures of silver wire, and adhesive strips were applied over the stump to overcome the action of the tendo Achillis, which sometimes has a tendency to draw the heel upwards, tilting the cicatrix downwards. It occasionally becomes necessary to resort to tenotomy to prevent this occurrence; but it was not required in the present instance.

The great advantages of this amputation over that through the ankle-joint (Syme) are the greater length of the leg, and the retention of the lower surface of the calcaneum and the dense cellular and fatty cushion of the heel, which allows the patient to walk directly upon the stump. The essential difference between these two methods of amputating at the ankle is the removal of

the calcaneum by dissecting it entirely out of the heel flap, in Syme's operation, and the retention of an oblique section of the bone, in Pirogoff's modification.

Pirogoff's method is the more conservative procedure, as it leaves the leg at least an inch and a half longer than it can possibly be after the operation of Syme. In the former, moreover, the tendo Achillis is not cut off and the power of the limb diminished, the heel flap is not cup-like and liable to retain pus, and its vascularity is not injured by dissecting out the bone. The retention of the bone in the flap, with its natural covering of a cushion of integument, produces eventually the most perfect basis for the support of the weight of the body.

This amputation is therefore more generally applicable to cases of injury; but in amputation for chronic disease of the tarsal bones, from the liability of the cancellated texture of the calcaneum to become carious, the entire removal of the bone, as in Syme's method, is usually the more available procedure.

BELLEVUE HOSPITAL, NEW YORK.

POPLITEAL ANEURISM.

J. P., æt. 26, waiter, colored, admitted August 6, 1873, had syphilis eight years ago; with this exception, has always enjoyed good health. Three months ago, patient fell through a hatchway, injuring his back and right leg. Two weeks later, he noticed a feeling of weariness in the right leg and a dull aching pain in the popliteal space. Shortly afterwards he noticed a swelling in this space, of the size of a cherry. This tumor gradually enlarged its growth, causing increased pain down the limb.

On admission, patient is a stout and apparently healthy man. On examination, a pulsating tumor is found in the right popliteal space, of the size of an orange. The pulsation is distensible in character and synchronous with the radial pulse. A double bruit is heard in the tumor. Firm pressure on the femoral artery as it passes beneath Poupart's ligament causes diminution in size of the tumor and cessation of pulsation and bruit; but these return immediately when the pressure is removed. Measurement of the right knee exceeds that of the left by $3\frac{1}{2}$ inches. Digital compression on the femoral as it passes beneath Poupart's ligament was employed, with few intermissions, until August 21, with no apparent benefit. At ten P.M. a shot-bag of ten pounds' weight was placed over the artery, in Scarpa's triangle, assisted by digital pressure. By this means pulsation, etc., entirely ceased in the tumor, and it did not reappear when pressure was removed at the end of ten hours. Repeated examinations failed to detect the slightest pulsation, the tumor remaining firm and solid. Slight pressure was kept up for several days by means of the shot-bag. This continued pressure was well borne by the patient, who said that he experienced very little actual pain.

September 15.—Patient is to-day allowed to sit up out of bed. The tumor is as solid as on the day pressure was discontinued. The leg, which during the time compression was used was cold and required the application of external warmth, has since then resumed its natural temperature. No internal medication was employed.

A case of diffused popliteal aneurism in another ward was treated on essentially the same plan, but with no benefit up to the present.

PELVIC HÆMATOCELE.

A case of extensive effusion of blood in the pelvis, forming a tumor which occupied the hypogastric and iliac regions and extended quite up to the umbilicus,

has been treated by the inunction of equal parts of unguent. belladonnæ and glycerin, hop poultices being applied over this. The relief to pain was marked, and the tumor rapidly softened and disappeared. Internally, iron was given, and an occasional anodyne.

ASPIRATION IN RETENTION.

The following are the notes of two cases in which aspiration was employed to relieve over-distention of the bladder in retention.

Case I.—G. B., æt. 13, three days before admission, slipped from an iron railing on which he was standing, striking on the perineum. He experienced acute pain in this locality, and, shortly afterwards, on attempting to urinate found himself unable to do so. His family physician failed on attempting to introduce a catheter. On admission, patient says that he has not passed water in two days; is suffering very acutely from abdominal pain and desire to micturate; bladder enormously distended, extending above the umbilicus. Perineum red, swollen, and painful. Catheter meets obstruction five inches from the meatus. Dieulafoy's pneumatic aspirator being obtained, a small-sized trocar is introduced in the median line of the abdomen, an inch above the pubes, and a large quantity of urine withdrawn, some being left in the bladder, for fear of hemorrhagic cystitis, which is apt to arise if the bladder be too suddenly relieved of its contents. External perineal urethrotomy was performed, and an extensive rupture of the urethra found at the membranous portion. An incision was made in the wall of the canal anteriorly and posteriorly to the point of rupture. Two months after the operation, the perineal wound had closed, and a No. 10 sound passed without difficulty into the bladder.

Case II.—J. W., æt. 18. Patient states that he had gonorrhœa two years ago. Within last two weeks has had considerable difficulty in passing his water. On the morning of the day of admission he was seized with retention, and when admitted, late in the evening, had not urinated in twenty-four hours. On admission, patient is suffering acutely from constant desire to urinate. A catheter is introduced, passing a slight stricture at the meatus, and meeting obstruction three inches from the meatus at a second stricture. Efforts to pass through this failed, and the patient suffering greatly, the aspirator was employed to relieve him.

Steurer's modification of Dieulafoy's instrument was used, and a large quantity of urine withdrawn, the point of puncture being as in Case I., the patient experiencing immediate relief, unmindful of the slight pain caused by the puncture. A whalebone guide was passed the next day, and forcible dilatation made.

ACUTE ARTICULAR RHEUMATISM.

The alkaline treatment is the one most generally adopted in the medical wards. A prescription which has found great favor is as follows:

R Sodæ bicarb., ℥ss;
Potass. acetat., ℥ss;
Liq. ammon. acetat., f℥ij;
Aquæ, q. s. ad Oj. M.

R Acid. citric., ℥ij;
Aquæ, Oj. M.

℥ij of each q. 3 vel 4 h.

This forms an agreeable effervescing mixture, rendering the urine alkaline very quickly. The frequency with which it is given depends upon the degree of alkalinity obtained as tested morning and evening.

On another division an effervescing draught is made without the addition of the salts of potassa. As a local application, tincture of iodine is sometimes employed. By some the painting is limited to the integument im-

mediately over the joint; by others, the integument corresponding to the blood-supply of the joint, a broad band above and below the joint answering this purpose very well.

Usually, however, cotton dusted with potass. nitrat. and covered by oiled muslin is applied to the joints, affording marked relief. An opiate is given at night:

R Sol. morph. sulph. (Mag.), ℥lxxx;
Tr. belladonnæ, ℥xvj;
Aq. fœniculi, ℥ij. M.

Sig. ℥j p. r. n.

If a friction-murmur develop in the pericardium or pleura, an attempt is made to arrest the inflammatory process by vesication, collodion cum cantharide being used for this purpose. If, however, this fails, hot fomentations are applied to the affected side. Spongio-piline wrung out in hot water and covered with oil silk is generally used. A young girl developed acute pleuritis, left side, and pericarditis, in the course of an attack of rheumatic fever. Spongio-piline applications to the side, changed every two hours, relieved wonderfully the intense lancinating pain she experienced, and appeared to hasten the absorption of the effused fluid. Alkalies were not used in this case. Tr. aconit. rad., ℥j q. i h., was given, modifying the amount of febrile disturbance. The patient rapidly convalesced.

In subacute rheumatism, iron, quinine, and cod-liver oil are given internally, with nutritious diet. Occasional revulsives, as tincture of iodine, are applied, as in the acute disease.

In chronic rheumatism, in addition to tonics, a large number of cases have been treated by painting the joint with hydrarg. et morph. oleatis, most of them receiving considerable benefit from its use, especially in the alleviation of pain.

W. H. FARRINGTON, M.D.

TRANSLATIONS.

UNILATERAL PULMONARY APOPLEXY IN RELATION TO CEREBRAL HEMORRHAGE.

By DR. AUGUSTE OLLIVIER. Translated from *Archives Générales de Médecine*, August, 1873.

BY ENRIQUE M. ESTRAZULAS, M.D.

IN the year 1866, while chief of the clinic of Prof. Grissolle, I was struck by a fact that greatly excited my attention. It was the case of a hemiplegic patient who died, and at whose post-mortem a hemorrhagic clot was found in the cerebrum, with apoplexy of the lung of the paralyzed side, that is, of the side opposed to the cerebral lesion. I then asked myself if there was not a bond of union between these two anatomical lesions, and purposed investigating the subject in future. After two years in charge of the retreat at Ivry, I have had occasion to verify the fact several times, and in the observations reported I have not referred to cases where the pulmonary apoplexy could have been traced to cardiac complication.

True pulmonary apoplexy as it is found in cardiac affections has been almost completely unnoticed by clinical observers, and no mention of it is made even in the latest works on pathology nor in special treatises.

Observation I.—Apoplexy followed by complete paralysis of motility on the right side of the face; complete paralysis of motility of the limbs of that side, and great diminution of sensibility in all the right half of the body. Dulness on percussion on the right lung,

and marked diminution of the respiratory murmur. Intense redness of right half of face shortly before death.

Post-mortem.—*Cranium.*—Vessels of the pia mater full of black blood. The cerebral convolutions offer nothing particular exteriorly, but on section the left corpus striatum is found torn from before backward, containing a clot as large as a nut. Blood has been effused in the corresponding lateral ventricle, which contains about two teaspoonfuls of liquid and black blood, and also a smaller quantity in the fourth ventricle.

Thorax.—Right lung adherent to the thoracic walls, and the seat of intense congestion. On section three apoplectic centres are found as large as a nut, also some emphysema; other organs offer nothing remarkable.

Three peculiarities were offered in this case: 1. Redness of right half of the face shortly before death.

2. Elevation of temperature noted in the right axilla.

3. Congestion and apoplexy limited to the lung in the paralyzed side.

Observation II.—Old hemiplegia of right side; new attack of apoplexy, with aggravation of the paralytic symptoms; paralysis of the right side of the face; paralysis of the limbs on the corresponding side, with contraction of the fingers and forearm; sensibility in the paralyzed side is diminished. Death forty-eight hours after the attack.

Post-mortem.—*Cranium.*—Left corpus striatum torn by apoplexy, and blood effused in the corresponding lateral ventricle, which is found full; right lung congested in all its extent, and underneath the pleura several ecchymoses of variable dimensions are found, and an apoplectic centre as large as a hazel-nut; left lung congested in its inferior and posterior third; other organs healthy.

Observation III.—Several attacks of apoplexy, aphasia and hemiplegia of right side. Death in convulsions.

Post-mortem.—*Cranium.*—On section of the hairy skin the vessels issue a large quantity of black blood. The bones of the cranium are very thick; the groove of the middle meningeal artery is much deeper and wider on the left side; dura mater free from adhesions, its vessels are gorged with blood and appear in varicose arborescences, its color is darkish and almost ecchymotic on the left side; on the posterior part of its left side is a fluctuating elevation, and when incised a sac is found containing about three hundred grammes of dark blood.

This hæmatoma rested on the occipital and parietal faces of the cerebrum, and extended to the fissure of Sylvius. Its walls were easily detached from the dura mater on one side, and from the arachnoid and dura mater on the other. The walls were highly vascular, with a thickness of two millimetres, and their internal surface presented a reticulated appearance. The hemisphere beneath is flattened, and the convolutions effaced. On section the gray substance is found deeper in color than on the other side. The left ventricle has no liquid.

Thorax.—Right lung adherent by old fibrous bands, crepitates badly. Its tissue is dense, and on section it presents a diffused hemorrhagic infiltration, and is studded with numerous apoplectic nuclei of variable size, situated principally in the posterior half. Other organs healthy, except the right knee, which contains some serum, and the cartilage of the patella is found eroded.

Section I.—It results from these observations that, under the influence of cerebral hemorrhage, congestion more or less intense, bloody effusions below the pleura, and true pulmonary apoplexy can be developed. This apoplexy presents itself with the ordinary characters, sometimes diffused and infiltrating the whole organ, sometimes circumscribed and presenting itself under the form of more or less numerous foci situated in the neighborhood of the pleura or in the midst of the parenchyma proper.

In regard to the cerebral lesions causing the pulmonary apoplexy, we notice the following:

They were on the left side. In the first two cases the corpus striatum was torn from before backwards, and the effusion had penetrated the corresponding lateral ventricle, and in one the fourth ventricle also. In the third case there was a meningeal hemorrhage resting on the occipital and parietal faces of the left hemisphere, reaching to the fissure of Sylvius, and the convolutions were effaced.

Of these lesions two peculiarities are noticeable: first, that the apoplectic centre was considerable, and consequently could exert compression on the base of the brain; and, second, that the blood had penetrated under the arachnoid and between the vascular and nervous layers of the pia mater, and on one occasion filled the great cavity of the arachnoid itself. These two conditions appear to me as having great importance in the production of the unilateral pulmonary congestion or apoplexy; inasmuch as in numerous cases that I have observed of cerebral hemorrhage where the lesion was small and deeply situated, I have found but visceral or subcutaneous ecchymoses, and never generalized congestion or true pulmonary apoplexy. It is also probable that other affections of the brain, such as softening or tumors, in *certain conditions of seat and extent*, can produce a strong congestion or true apoplexy of the lung on the opposite side (Fleischman).

Pulmonary congestion and apoplexy of cerebral origin can be rapidly developed and follow an attack of apoplexy. In the first case, dulness was elicited nine or ten hours after the attack, and in the second, dulness and subcrepitant râles were heard the morning following the attack. In these cases, death occurred between two and fourteen days, in consequence of the brain-lesion.

Section II.—We will see now the relative influence of cerebral lesions in the production of hemorrhage, especially in the lungs of the paralyzed side.

It has long been known that section of the pneumogastric, in animals, is followed by bloody effusions in the lungs. Brown-Séquard has also shown the almost constant occurrence of visceral hemorrhage following lesions of certain parts of the base of the brain and of the brain itself. These hemorrhages occur more commonly in the lungs.

Brown-Séquard admits that the rupture of the blood-vessels that originate these hemorrhages is due either to a simultaneous contraction of the veins and arteries, forcing the blood into the capillaries and causing their over-distention and rupture, or, less probably, has been effected by the contraction of the venules alone. Be this as it may, Brown-Séquard thinks that the rupture of the capillaries is due to the irritation of the nerves of the blood-vessels following lesions of the pons Varolii and other parts at the base of the brain. Now to another question on which physiologists are divided:

What is the course followed by the vaso-motor nerves that, starting from the affected point in the brain, go to the lung in which the hemorrhage is produced? Mr. Schiff and Brown-Séquard maintained that these nerves descended with filaments of the pneumogastric; but the latter physiologist has recently shown that after section of the par vagum and irritation of the central ends, pulmonary hemorrhage is produced, while nothing like it occurs if the peripheric ends are excited. He has concluded, then, that the vaso-motor nerves of the lungs, heart, etc., pass through the cervical medulla and the first thoracic ganglion. Moreover, he maintains that the vaso-motor nerves of the thoracic and abdominal viscera do not come from the medulla oblongata, as generally thought, but from the pons Varolii and parts that surround it. It will be seen, then, that the existence of this variety of pulmonary apoplexy that I have studied is demonstrated by clinical observation and physiological experiments, the two fundamental bases of pathology.

PHILADELPHIA

MEDICAL TIMES.

A WEEKLY JOURNAL OF

MEDICAL AND SURGICAL SCIENCE.

The Philadelphia Medical Times is an independent journal, devoted to no ends or interests whatever but those common to all who cultivate the science of medicine. Its columns are open to all those who wish to express their views on any subject coming within its legitimate sphere.

We invite contributions, reports of cases, notes and queries, medical news, and whatever may tend to increase the value of our pages.

All communications must bear the name of the sender (whether the name is to be published or not), and should be addressed to Editor Philadelphia Medical Times, care of the Publishers.

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EDITORIAL.

ANNOUNCEMENT.

THE last issue completed the third year of the PHILADELPHIA MEDICAL TIMES. The editors hesitate to make any promises for the coming year, knowing how often arrangements apparently effected fail in their accomplishment: it seems, however, proper to state that original communications are promised by leading physicians in London and Edinburgh; that the staff of American contributors has increased; that a competent physician has gone to Paris to report clinical lectures by professors of l'École de Médecine, and to furnish notes of the doings of the various societies and of the hospital practice; that the London letter will appear regularly; that a correspondence is promised from Vienna; and that at home the practice of the New York and Philadelphia hospitals will be reported.

This journal was not inaugurated for the purpose of making money, but was the outcome of a need felt by the medical profession. Born of the profession, it should be maintained in the interest of the profession. We are profoundly convinced that, given a sufficiently large subscription-list, it can be made to take rank with any journal of its class in the world; and as the income increases the publishers promise to increase the size of the journal, or in other way expend upon it moneys received. We pay for all original papers deemed worthy of publication, and for contributions of especial value we will continue, as we have done in the past, to pay especial rates.

YELLOW FEVER.

ALL of our readers have of course heard of the frightful epidemic of yellow fever which has depopulated the little city of Shreveport, driving away one-half of its population and killing ten per cent. of the remainder. Like most other similar visitations, this one is the result of a total neglect of all sanitary rules. Shreveport is the second city of Louisiana,—the great trade centre of the Red River country, so famous for its cotton and sugar,—and is estimated to have a population of from 10,000 to 13,000. It is on the Red River, at the head of steamboat-navigation, and fifteen miles below the great Red River raft, which is one of the most remarkable formations in the world, being a mass of logs and drift-wood over forty miles long, and entirely choking up the great stream, which is over twelve hundred miles long, or, including the South Fork, twenty-one hundred. This raft turns the water of the river over the adjacent country, forming great bayous, through which, at high water, steamboats pass around the raft; and it is now being blasted away by the general government.

The city is on a bluff at the river-bank, and is well situated for drainage. The whole country around is flat, and for miles and miles there is one continuous succession of marshes, swamps, and bayous. Though at low water a great surface is exposed to the action of the sun, making the surrounding country subject to malarial influences in the hot season, still the health of the city has generally been good; but this is the third time it has been visited somewhat severely by the yellow fever, the first time having been in 1853, and the second in 1867. It seems that, owing to the contending factions which have reduced the government of Louisiana to chaos, and which would have brought about a Mexican-like civil war had it not been for the strong arm of the federal government, Shreveport has been for some months without a regular municipal government. Those having control of the city have been utterly negligent of their duty, and have left the streets in an indescribably filthy condition. Under the hot semi-tropical sun, the reeking heaps of garbage, the swollen, bursting carcasses of all sorts of animals, the stagnant pools full of all uncleanness, have become the resting-place of the poison. Filth and exposure begot recklessness, and recently a most extraordinary attraction was added to the already too pressing invitation to epidemic disease. It is said (*Vicksburg Herald*) that a boat, having on board a hundred or more Texas cattle, recently sank in the Red River, very near to

Shreveport, and the dead animals were fished from the wreck and taken ashore. After having been skinned for their hides, the bloated bodies were permitted to remain exposed to the rays of a burning sun, until they poisoned the air with their sickening effluvia. Under these circumstances, is it a wonder that another tale of sorrow and desolation, another frightful warning, has been added to the long list, which should teach the world, if it would only learn, the importance of sanitary science?

AS most of our readers no doubt know, some years since there was inaugurated by law in the province of Ontario, Canada, a general medical board or council, before which all persons desirous of practising medicine in the province had to appear and undergo an examination. This licensing board has always reminded us of Barnum's happy family, since upon it regulars, homœopaths, and eclectics sit in sweet accord. Strict written and oral examinations have been enforced by this board, the candidate passing first upon those branches supposably common to the three schools, and then being examined in therapeutics according to his wishes as to his future practice.

However strange and repulsive this mixture of Jew and Gentile, of science and impudence or insanity, may appear, the process prescribed by the law really seems to have wrought great good. The compulsory study of a scientific groundwork, the side-by-side contrast of truth and falsity, have had such marked results that during the last nine years not a single homœopathist or eclectic has passed as such in the province, so that the chief of the homœopathic division has recently withdrawn from the council, and is seeking the repeal of the law under which it was created.

IN a discussion before the Medical Society of the County of Kings, New York, reported in *The Sanitarian* for October, Dr. A. N. Bell remarked,—

"He knew of but one antidote to the reproduction of fungi, and that was fungi. Naturalists tell us that the 'fairy rings' of the prairies are caused by fungi, and in this wise: they attack and destroy the grass at a central point, spreading out on all sides, leaving the ground bare. After a time, when the fungi have totally disappeared from the point first attacked, grass seeds again take root, and, spreading outwards from the centre towards the expanding border, form the ring. And the singular feature is, that the same place is not again subject

to attack: the fungi have poisoned against themselves.

"This natural history of the fungi in the prairies bears a singularly interesting analogy to the results of certain zymotic diseases. They poison against themselves; and whether this peculiarity is due to the nature of the germ or not—and that it is a fungus he would not undertake to say—one thing, at least, is certain, it acts very much like it."

The fact asserted by Dr. Bell is very curious, and we would like to know upon whose observation it rests,—how a given spot was marked, and how long it was watched. Indeed, at present the statement cannot be accepted as true in its fullest extent. It may, however, be acknowledged that the fungi will not grow for some time on the ground which they have gone over; but that this is due to their poisoning against themselves seems a most unwarrantable conclusion. Fungi feed on organic matter; certain species affect certain forms of organic matter. The fairy fungus eats up its peculiar food, and the soil, being exhausted, is no longer able to sustain the parasite. No doubt if the soil be allowed to rest long enough in its wild uncultivated state, it will recover itself. At least, so we reason.

THE effect of custom in affecting our sensibilities is a strange thing. With us it is considered *infra dig.* to contract for medical services to families at so much a week, month, or year, whilst to receive a fixed fee per visit is completely *en règle*. In India things are contrariwise; and concerning the proposition to have regular fees, so much a visit, the *Indian Medical Gazette* editorially discourses as follows:

"We have received a circular from a brother officer, in which he proposes to supersede the time-honored contract system by a scale of fees per visit, arranged according to salaries. This would necessitate the keeping of accounts and the submitting of bills. There seems to be but one step between this sort of thing and the shop,—the lowest form of medical practice. It would be demoralizing in the extreme to associate every particular act of attendance or service on the part of the doctor with a sum of money, in most cases trifling; and nothing could be more humiliating than the necessity of annually, or at the end of a protracted attendance, presenting a grateful patient or sorrowing relative with something like the following:

JOHN JONES, JOINT MAGISTRATE OF STINKABAD,		Dr.	
To SURGEON-MAJOR PHILIP GRAB,			
Civil Surgeon of Stinkabad,			
		Rs.	As. P.
To 25 visits, @ Rs. 5		125	0 0
" 5 night do., @ Rs. 10		50	0 0
Total		175	0 0
		E. & O. E.	
		Received payment,	
		P. GRAB.	

"Nothing would more effectually smother the nice feeling which ought to exist between a doctor and his patient than this sort of thing; a medical man would even feel a delicacy in paying a second visit to a sick person, however necessary he might consider it, unless specially sent for."

IT is stated that the tops of the Ornithogallum pyrenaicum have come largely into use at Bath, England, as a substitute for asparagus.

PROCEEDINGS OF SOCIETIES.

PATHOLOGICAL SOCIETY OF PHILADELPHIA.

THURSDAY EVENING, SEPTEMBER 11, 1873.

THE PRESIDENT, DR. J. H. HUTCHINSON, in the chair.

DR. W. G. PORTER exhibited for Dr. Milner the *urethra, ruptured bladder, ureters, and kidneys* of a dog. The dog was brought to Dr. M. with apparent retention of urine. A post-mortem examination revealed a calculus in the urethra, which had so effectually occluded the canal that the accumulation of urine finally caused a rupture of the bladder. The stone was lost.

Dr. JAMES TYSON presented a specimen of *aneurism of the abdominal aorta* from Geo. W. E., aged about 50 years, who was admitted to the Philadelphia Hospital in the latter part of August, complaining of pain in the left lumbar region, which, however, received little attention, as the man was thought to exaggerate his suffering. He therefore obtained little sympathy. He said he had had syphilis many years ago, and attributed all his suffering to this cause.

His complaint continuing, a physical exploration of his abdomen revealed dulness throughout the left hypochondriac and lumbar regions. A cystic kidney was thought of, and the urine was carefully examined, but found free from pus or albumen.

On the 1st of September a more careful physical exploration was made, when it was found that dulness began laterally at the sixth rib and extended to the crest of the ilium. The axilla above the sixth rib was normally resonant. The epigastric region on light percussion was tympanitic; to a forcible blow there was dulness. The dulness of the left lumbar region extended to the median line. The iliac region responded normally to percussion. Posteriorly, percussion was dull from the spine of the left scapula to the crest of the left ilium. In the infra-spinous fossa there was bronchial breathing; below the scapula the respiratory murmur was feeble, and vocal fremitus was almost absent, also laterally below the sixth rib.

The patient now had a very frequent, feeble, and irregular pulse, but his skin was warm, and there were no symptoms of collapse. He complained of pain throughout the area of dulness, but could sit up without any difficulty or distress in breathing. No impulse was at any time observed, and auscultation of the abdomen was not thought of.

On September 3, the left half of the abdomen and the lower third of the thorax were much swollen, the point of culmination appearing to be in the vicinity of the floating ribs. This area was hard, flat on percussion, and purplish in hue. The patient was now evi-

dently in collapse, and died at five o'clock this day, the last examination having been made about noon.

The post-mortem examination was made fifteen hours after death. The region alluded to in the last note as the seat of dulness and hardness had become soft, and the intercostal spaces, which were almost obliterated, were then distinct. On making the abdominal section, the space between the muscles and fascia was found infiltrated with blood. On laying back the abdominal walls upon the left side, this infiltration was noticed forming a clotted mass in the situation of the abdominal walls over the left iliac fossa. There was also observed a tumor occupying the left hypochondriac and upper part of the left iliac region, encroaching somewhat upon the thoracic space, so that the lower edge of the left lung corresponded with the fifth interspace. To the left side of the tumor was attached the descending colon. On the upper and outer surface lay the spleen, which was of normal size and consistence; on the antero-lateral surface of the tumor lay the left kidney, much enlarged, measuring five inches in its longer diameter and two and a half in its width.

Further exploration revealed this tumor to be a huge clot beneath the peritoneum, continuous at its upper portion with an opening in an aneurism of the aorta below the diaphragm. The sac was four inches in diameter, and lined with plates of calcareous matter. Anteriorly from the aneurism protruded a prominence which resembled the head of the pancreas and was perforated by a blood-vessel of considerable size. This, on section, proved to be an organized clot made up of numerous concentric layers of fibrin, by which the anterior wall of the vessel was greatly strengthened, rendering rupture in this situation impossible. The aneurism was therefore compelled to yield at a weaker point, which was on its left inferior aspect. The firmness of the large clot led the doctor to believe that the hemorrhage had ceased for a time; that is, the clot had closed the orifice of rupture, after which the man lived in the feeble but not collapsed state alluded to as present two days before death. A yielding of the clot finally permitted the hemorrhage which caused his death, and which produced the liquid infiltration and mass of semi-liquid or imperfectly coagulated blood in the abdominal wall between the muscles and peritoneum and over the left iliac fossa. There was caries of the bodies of the lumbar vertebrae.

Dr. C. B. NANCREDE referred to a case of aneurism of the abdominal aorta in which there had been profuse diuresis, and desired to know whether it was present in this instance. Dr. TYSON replied that none had been observed.

Dr. ALLIS referred to an autopsy at which he was present. The case presented during life a solid tumor extending from the diaphragm to the pelvis and lying on the left side of the vertebral column. It was attended with excruciating pain, and the relief the patient experienced from morphia was so complete that he was suspected of malingering. The case was under observation for about a month, and abscess of some deep structure was suspected. No suspicion of aneurism was entertained.

Dr. ALLIS did not see the case during life, and would ask the Society what effect aneurism of the abdominal aorta would have upon the pulsation in the femoral arteries.

The PRESIDENT said that a *retarded beat* in the femoral was expected in affections of this kind.

Dr. WHARTON SINKLER exhibited a specimen of *aneurism of the ascending aorta*, from J. G., colored, æt. 66 years, married, and of temperate habits. He was by occupation a coachman, but for twenty years had had no regular employment, and had done light work of any kind. In 1848 he sustained a compound frac-

ture of the leg, and was in the Pennsylvania Hospital a year, at the end of which time the leg was amputated just below the knee. The stump healed rapidly, and has never given any trouble. With the above exception, he had always enjoyed good health. Never had acute rheumatism, but had occasionally pain in the shoulder or knee.

Two years ago, he began to have slight attacks of dyspnœa on exertion; had no palpitation of the heart or other symptom of disease of that organ. Had never had precordial pain.

About one year ago, he had a violent and alarming attack of dyspnœa. Stimulants and a hypodermic injection of morphia very promptly relieved the symptoms, and for several months the patient enjoyed good health, with the exception of occasional paroxysms of dyspnœa.

A physical examination revealed a loud blowing murmur at the base of the heart, coincident with systole.

The murmur was transmitted along the course of the aorta and the carotids. There was no visible pulsation of the superficial arteries. Urine was scanty, and contained about one-third albumen. No microscopical examination was made.

About the beginning of April, 1873, a pulsating tumor, about the size of a pigeon's egg, was observed just above the sternal end of the left clavicle. There was no thrill distinguishable in it, but on placing the stethoscope over the swelling the aortic murmur was distinctly heard. The tumor increased gradually in size, and finally the clavicle was elevated by it to a marked degree. There was no dysphagia or aphonia.

On May 19, sphygmographic tracings were taken of the right and left radials. There was a modification in the trace of both radials, but the right indicated a more oblique line of ascent and a more rounded apex-curve.

During the last five months of his life there were general anasarca and some peritoneal effusion. There was also some œdema of the lungs.

Diuretics and purgatives were used, but without relief to the dropsy, and the patient gradually became weaker, and died August 20, 1873.

Post-mortem, thirty-two hours after death.—Rigor mortis marked. Considerable deposit of fat in superficial fascia. Cartilages of ribs ossified. Pleural and abdominal cavities contained a moderate quantity of fluid. Lungs congested. Heart dilated and walls thin. Pericardium adherent to heart throughout, but easily detached. No disease of valves, except a slight thickening of the aortic valves.

Arch of aorta enlarged to double its usual size. Its inner surface was roughened, and covered with patches of atheroma and calcareous plates. The innominate artery was greatly enlarged, the dilatation extending to the carotid and subclavian for about two inches.

The left carotid and subclavian arteries were not materially increased in size. The kidneys were small, but did not appear diseased.

Dr. C. H. BURNETT presented a bean from the honey locust-tree, removed from the ear of a boy æt. 13 years. There was every reason to believe it had been introduced two years ago. The boy consulted him not with regard to this ear, but for some pain in the other; and it was only on examining the ear for another purpose that he discovered the foreign body. It was removed without any difficulty. Indeed, Dr. Burnett had never met any difficulty in removing foreign bodies from the ear when they had not been previously manipulated by the laity or sometimes by medical men.

The bean was in a perfect state of preservation, and the boy said he had been induced to introduce it from having seen the same thing done by older boys, who pretended to remove the foreign body through the nose.

TWENTY-FIRST ANNUAL MEETING OF THE AMERICAN PHARMACEUTICAL ASSOCIATION.

HELD AT RICHMOND, VIRGINIA, SEPTEMBER 16, 1873.

Reported by ADOLPH W. MILLER, M.D.

PRESUMING that the transactions of this body, which bears so close a relation to the medical profession, may be of interest to some of your readers, venture to offer the following epitome of the proceedings, which have just been brought to a highly successful termination. The attendance of members at this, the first meeting of the Association in a Southern city, was larger than usual. All the deliberations were carried on in a very orderly, decorous, and business-like manner, and they were attentively listened to by the assembled pharmacists, many of whom were accompanied by their ladies.

The meeting was called to order on Tuesday, the 16th ult., at three o'clock, by President Albert E. Ebert, of Chicago, Illinois. He stated in his introductory remarks that at the same moment the Austrian Apothecaries' Association was in session in Vienna, and the British Pharmaceutical Conference at Bradford, England, from the latter of which he read a telegram of hearty greeting, to which he had replied as follows: "We return your fraternal greetings."

The mayor of the city of Richmond, A. M. Keiley, Esq., was then introduced to the audience. He congratulated the Association on its having attained its majority in that city, and proposed that its members be naturalized and remain evermore citizens of the Old Dominion. In concluding his happy and very appropriate address, which was received throughout with cheers, he dwelt on the good taste shown by the visitors in bringing with them the fair representatives of their hearths.

The important event of the second session, on Wednesday morning, was the election of officers for the ensuing year, resulting as follows:

President,—John F. Hancock, Baltimore.

First Vice-President,—William Saunders, London, Ontario.

Second Vice-President,—John F. Buck, Jackson, Mississippi.

Third Vice-President,—Paul Balluff, New York.

Treasurer,—Charles A. Tufts, Dover, New Hampshire.

Permanent Secretary,—John M. Maisch, Philadelphia.

Reporter on the Progress of Pharmacy,—C. Lewis Diehl, Louisville, Kentucky.

The Standing Committees on the Drug Market, on Papers and Queries, on Business, on Unofficial Formulas, on Legislation, on Liquor-Dealers' License, on Stamp Tax, and on the Meeting in 1876, were also confirmed; after which the treasurer made his report, showing a balance of \$982.77 on hand.

Professor Ebert, of Chicago, had in store a very agreeable surprise, consisting in a donation of five hundred dollars to the Association. In the modest note accompanying his munificent gift, he desired the annual interest of the fund to be devoted to procuring a suitable prize for the best essay containing original investigation of a medicinal substance, determining new properties, or containing other meritorious contributions to knowledge. Thanks befitting the occasion were offered to the donor, and it was at once decided to designate the present as the Ebert Fund, and its interest as the *Ebert Prize*.

Prof. Diehl presented a report detailing a plan for an international pharmaceutical congress, to be held in Philadelphia in 1876.

A number of valuable papers were read in the course of the morning. Among them were several of more

than usual interest, by Dr. Squibb,—one of these a new style of physicians' pocket-cases, whose peculiarity consists in being furnished with an accurately graduated minim pipette, which can be dipped into each of the vials, thus materially facilitating the administration of small doses of powerful remedies. The cases are made of different sizes, some of them being furnished with clasps, while others are arranged as slides. Obstetrical cases for fluid extracts of ergot and veratrum viride and denarcotized tincture of opium, with measuring pipette, were also shown, and it was stated that these are very popular in New York City.

Prof. G. F. H. Markoe, of Boston, read a lengthy review of the United States Pharmacopœia of 1870, in which he called attention to a number of inaccuracies, and severely criticised some of the processes. He particularly deprecated the plan of making so many of the fluid extracts by a set schedule, and desired a separate formula for each of them.

The morning was chiefly occupied with the reading of scientific papers, one of the most important being the official report of Prof. Hancock on the unofficial elixirs. His paper was accompanied by some very elegant specimens of his elixirs, for all of which he gave succinct and readily executed formulæ.

Prof. Maisch then offered a resolution recommending that these formulæ be used by the members of the Association, and that a printed copy be sent to the medical societies of the Union, with a request that physicians, when prescribing elixirs, would give preference to these.

Prof. Maisch showed some muriate of cinchonia which had been sold to Mr. G. I. Luhn, of Charleston, South Carolina, as sulphate of quinia, by a notorious New York firm: it had been put up in imitation of imported French quinia, and was sold a trifle below the price of the domestic article.

A resolution tendering the hearty thanks of the Association to the pharmacists and citizens of Richmond, for the cordiality of the reception at this its first visit to the Sunny South, preceded the final adjournment.

Pharmaceutical Exposition.—Perhaps the most inviting and instructive feature of the meeting was the exhibition of drugs, chemicals, apparatus, and other objects of interest to pharmacists. Of the many interesting objects space is wanting to notice more than a few.

As usual on similar occasions, the finest and largest collection of choice chemicals was exhibited by the renowned Philadelphia firm, Messrs. Powers & Weightman. One of their bell-glasses contained about \$1300 worth of morphia, and another about \$800 worth of quinia, the entire value being nearly \$5000. Rosengarten & Sons presented a good assortment of fine chemicals, also a handsome specimen of cultivated cinchona-bark from the government gardens at Ootacamund in India.

Charles T. White & Co., of New York, made an elaborate display of raw chemicals; they make a specialty of resublimed carbonate of ammonia, and very pure acetic acid, which enable druggists to furnish the liquor ammonii acetatis entirely free from empyreumatic taste.

Lazell, Marsh & Gardiner, of New York, displayed true Pareira brava, agreeing with the description recently published in the English journals; Austrian rhubarb from Rheum Rhaponticum, which has lately been rejected by the New York Custom-House; Persian opium, a new sophistication, being an extract made of the entire poppy capsule.

Hance Bros. & White, of Philadelphia, made decidedly the finest and most ornamental display in the room. Their very numerous preparations were elegantly put up in engraved bottles, mounted on a beautiful black-walnut stand.

Ira W. Blunt, of Richmond, Virginia, was almost constantly on hand to explain the merits of Valentine's meat-juice. The superiority of the domestic meat-extract is claimed to be due to the low temperature used in its evaporation, which never exceeds 130°, so that the albumen is not coagulated, but is retained in its natural state.

Dr. James B. McCarthy, of Richmond, offered seven specimens of native wines made at his vineyards in Henrico County, each of them accompanied by the grapes from which it is manufactured. These wines, being perfectly pure, having a pleasant taste, and being offered at comparatively low prices, deserve a favorable recognition by the profession.

Good, Roof & Co., of New York, exhibited elixir de Vichy, imported from France. This claims to be prepared by concentrating Vichy-water and then flavoring with an aromatic cordial.

S. Mason McCollin, of Philadelphia, showed watch-spring pessaries made in an improved manner by the Breed process.

Oscar G. Crosby, of Richmond, Virginia, had on exhibition a model of an improved invalid's bedstead, invented by himself. It is furnished with a crank for elevating the upper half of the bottom to any desired angle, at which it can be kept stationary; also a crank for lowering the mattress without disturbing the patient, and one for moving and fixing the foot-rest to wherever it may be most convenient. There is an additional arrangement for lowering the lower half, so that the whole bedstead becomes converted into a reclining chair. It is apparently a very useful, and certainly is a highly ingenious, invention, though, like many similarly complicated appliances, it may possibly soon get out of order.

REVIEWS AND BOOK NOTICES.

SMALLPOX, FROM AN EPIDEMIOLOGICAL AND PROPHYLACTIC STAND-POINT. By DR. LEON COLIN, Physician-in-Chief of the Military Smallpox Hospital of Bicêtre during the Siege of Paris, 1870-1871, etc., etc. (La Variole au Point de Vue épidémiologique et prophylactique. Par LEON COLIN, Médecin principal de l'Armée, Professeur à l'Ecole d'Application de Médecine militaire (Val de Grâce), Médecin-en-chef de l'Hôpital militaire des Varioleux de Bicêtre pendant le Siège de Paris, 1870-1871. Paris, J. B. Baillière et Fils, 1873, pp. 158.)

In this well-written monograph Prof. Colin gives us the results of his experience in the epidemic of smallpox which prevailed so extensively in Paris at the time of the German invasion of France; and, as the field of observation was, unfortunately, very ample, comprising nearly eight thousand cases and over one thousand deaths in a period of about six months, the conclusions at which he arrived are eminently valuable.

As it would be impossible to reproduce these, however, in the short space allotted for this notice, we will content ourselves with mentioning that in regard to animal vaccination, of late so warmly discussed, Dr. Colin states that out of one hundred and twenty of the hospital attendants vaccinated in his presence, from a heifer, not one contracted smallpox, although living so constantly in the atmosphere of contagion; and in reference to the isolation of smallpox cases, Dr. Colin asserts that in spite of the overflowing condition of the wards of Bicêtre, where twelve hundred variolous patients were crowded together for several months, no perceptible aggravation of the disease in consequence of the accumulation of poisonous emanations in the circumambient air could at any time be detected.

THE EFFECTS OF HIGH ATMOSPHERIC PRESSURE, INCLUDING THE CAISSON DISEASE. By ANDREW H. SMITH, M.D., Surgeon to the New York Bridge Company, Member of the Academy of Natural Sciences, Philadelphia, etc., etc. Being the Prize Essay of the Alumni Association of the College of Physicians and Surgeons. New York, 1873, pp. 53.

However true, as a general rule, may be King Solomon's assertion that "there is no new thing under the sun," we certainly seem to have, in the subject of this memoir, a novel malady, which former ages never inflicted upon mankind. From the "caisson," this Pandora's box of the nineteenth century, appears to have issued, to quote Dr. Smith's definition of the complaint which he has the honor of naming, "a disease depending upon atmospheric pressure, but always developed after the pressure is removed. It is characterized by extreme pain in one or more of the extremities, and sometimes in the trunk, and which may or may not be associated with epigastric pain and vomiting. In some cases the pain is accompanied by paralysis more or less complete, which may be general or local, but is more frequently confined to the lower half of the body. Cerebral symptoms, such as headache and vomiting, are sometimes present. The above symptoms are connected, at least in the fatal cases, with congestion of the brain and spinal cord, often resulting in serous or sanguineous effusion, and with congestion of most of the abdominal viscera."

In the treatment of these cases, whereof thirty are recorded, Dr. Smith relied chiefly on morphia and atropia, by the mouth or hypodermically, and the administration of Squibb's fluid extract of ergot in teaspoonful doses. Some judicious suggestions in regard to prophylaxia conclude the report.

A MANUAL OF MEDICAL JURISPRUDENCE. By ALFRED SWAINE TAYLOR, M.D., Fellow of the Royal College of Physicians, and Professor of Medical Jurisprudence and Chemistry in Guy's Hospital. Seventh American Edition. By JOHN J. REESE, Professor of Medical Jurisprudence and Toxicology in the University of Pennsylvania.

Every system of morals inculcates respect for gray hairs; and when a book has reached the hoary age of the seventh edition, let the critic fondle it lovingly if he like, but let him beware how he raise an irreverent hand against the work anointed by the profession. In the presence of the general verdict, we deem it best to keep silence, and merely in a few words inform our anxious readers what has happened to their favorite in this its sixth regeneration. Well, the high priest of the ceremonial has been Prof. Reese, and he appears to have done his work judiciously,—we may say lovingly. To aid him he has had the advanced sheets of the still parturient London edition of the author's great work on the Principles and Practice of Medical Jurisprudence, and has availed himself of it by incorporating much new matter from it into the text of his bantling. Several subjects not treated of in the former edition are discussed in this one; and we doubt not that the work will continue to enjoy the sunshine of success and of professional favor.

NATURE IN DELIRIUM TREMENS.—Dr. Van de Warker believes (*New York Medical Journal*, August, 1873) that opiates, stimulants, and narcotics generally do harm in the treatment of delirium tremens, and that the proper plan is to provide for the nutrition of the impoverished brain and nerve-centres, by the free administration of food which can be easily digested and assimilated. Beef-tea, raw eggs, and milk, with attention to the condition of the bowels, have given him very satisfactory results.

GLEANINGS FROM OUR EXCHANGES.

WOUND OF THE LIVER (*Chicago Medical Journal*, September, 1873).—Dr. G. W. Stewart reports the case of a farmer's boy, æt. 17, who was knocked down by a runaway team in front of his plough, the point of which struck him in the back. It inflicted a wound eleven inches in length, extending from the fourth to the first lumbar vertebra, in the left hypochondriac region, engaging the twelfth rib and denuding it of its periosteum in the anterior third, passing through the peritoneum, entering the liver at the left lateral ligament and proceeding in the direction of the intersection of the longitudinal with the transverse fossa, within which, and only a few lines beyond the terminus of the incision, could be distinctly felt the hepatic artery. Nearly or quite all of that portion of the left lobe of the liver anterior to the incision was found protruding through the wound. The case was seen about two hours after the accident; hemorrhage had ceased, but the patient was nearly comatose from want of blood, a large quantity of which was removed from the abdominal cavity with a sponge: the stomach was empty and had escaped injury, as had also the intestines, diaphragm, and other organs. The abdominal aorta could be distinctly felt in the floor of the wound.

The protruding portion of the liver was replaced with some difficulty, and retained by a compress and a wide roller bandage; cold water was applied to the wound, which was closed up, the patient was placed on a bland and restricted diet, and small doses of opiates were administered. The compress was removed at the end of twenty-four hours, but no other change was made for some time. The wound began to discharge pus freely about the sixth day, the patient gained strength from the first, and no indications of peritonitis appeared at any period. About the twelfth day the flaps sloughed off and exposed to view the liver and also the twelfth rib. A portion of the former equal in size to a two-inch cube was again protruding through the wound, and was irreducible, owing to adhesions between the borders of the left lobe and the abdominal wall. Caustic was applied daily, and the cauterized material afterwards removed with a knife, until the prominence had disappeared. About one-half of the exposed and projecting rib was then removed with bone-forceps. The wound then improved in condition, the two fragments of liver united perfectly, the cauterized surface healed speedily, granulations sprang up rapidly in the muscular tissue and continued until the divided muscles were reunited and integument formed over the entire surface. The case terminated in complete recovery in about seventy days.

GASTROTOMY FOR INTESTINAL OCCLUSION.—Dr. Samuel Whitall, in an interesting and elaborate paper on the above subject, gives a history of the operation from the earliest days down to the present time, and discusses at length its feasibility, the modes of its performance, the objections which are urged against it, and the beneficial results which are to be hoped for from it.

He details, classifies, and tabulates thirty cases of operation, and finds that when the conditions were as favorable as one could reasonably expect in a disease of such great fatality—*i.e.*, when there existed no serious abdominal obstacle, such as extensive peritonitis, gangrene, perforation, insuperable occlusion, etc.—"one hundred per cent. were saved, whereas without such interference every one of these must unquestionably have died."

He says the term *gastrotomy* is an unfortunate one, and had better be restricted to the operation of opening the stomach, *laparotomy* more accurately expressing simple abdominal section. "The term *gastrotomy* (or

laparotomy) in its present connection is applied to a large incision made through the abdominal walls for the purpose of searching for, and, if possible, of relieving, internal intestinal obstruction. If after laying open the abdominal cavity the operator should open the intestine, whether he intend to sew it up again and return it into the peritoneal cavity, or to establish an artificial anus, the operation receives the name of *gastro-enterotomy*. *Enterotomy* is applied to the operation which has for its object the establishment of an artificial anus, whatever may be the process employed or the seat of the operation."

In reply to the query, What can be accomplished by the operation? he answers—1. The restoration of the patient to perfect health by the complete removal of the obstruction without opening the intestinal canal.

2. In cases of intramural occlusion, it enables the operator to discover its exact locality, and after having removed the obstacle he can sew up the bowel and return it into the abdominal cavity, or establish an artificial anus, as circumstances require.

3. Should the seat of the obstruction not be discovered, it enables the surgeon to form an artificial anus as near as possible to the affected point, in the hope that, the intestinal tension being thus relieved, the passage would become clear and the artificial opening subsequently close.

4. The seat of the obstruction being recognized but found to be insuperable, it enables the operator, by the formation of an artificial anus, greatly to relieve the patient's sufferings, in mitigating the pangs of unavoidable death.

This paper was written by Dr. Whitall apropos of the death of Dr. Tyce, of New York City, in whose case he believes gastrotomy would not only have been justifiable, but would have been of incalculable benefit.—*New York Medical Journal*, August, 1873.

ITCH IN THE LEOPARD.—Dr. Theodor Simon, of Hamburg, records, in the *Archiv für Dermatologie und Syphilis*, No. 1, 1873, a case of scabies in the leopard, which came under his notice. The animal was an old member of the Zoological Garden collection, and crusts upon various parts of his body had been noticed for some time previous. The leopard was examined and some of the crusts were taken from his head, and under the microscope showed epidermic scales, blood-corpuscles, and numerous itch-mites, together with their excrement and eggs. The insects were found to be of all ages, and both males and females were discovered, though the latter were greatly in excess. Upon close study, the mites were determined to be identical with the human itch-mite, or *Sarcoptes hominis*. The disease was most marked about the head and breast of the animal. In what way the scabies had been contracted could not be discovered, for the keeper in charge of the leopard, although frequently touching him, was free from any trouble of the kind. The beast was successfully cured by inunctions of balsam of Peru, which were made, not without difficulty, by the keeper. Some time after, the leopard died suddenly, and the examination of the body showed no trace of the former scabies.

ACUTE ANÆMIA DUE TO FRIGHT.—An interesting case presented itself at St. Bartholomew's Hospital, in the person of a young woman, æt. 20, pallid, bleached, not menstruating, and with the typical aspect of an anæmic female. She stated that ten weeks previously she was in perfect health, had a good color, and menstruated regularly. At that time a fire had broken out in a house adjoining that in which she lived, and she had been exceedingly alarmed. Since then her menses had ceased and she had assumed her present appearance.

There can be no doubt that anæmia is too frequently regarded and treated as the result of a constant blood-defect—the consequence of a chemically altered circulating fluid. Such cases direct attention to a deeper and more significant pathogeny for some forms of anæmia,—an altered condition of the nervous system. *British Medical Journal*, Aug. 23, 1873.

ATROPIA IN CHOLERA.—During a recent outbreak of cholera, Dr. R. Saunders obtained excellent results by the hypodermic injection of one-fiftieth to one-thirtieth of a grain of sulphate of atropia. In some cases the relief afforded was astonishing: the more distressing symptoms—vomiting, purging, and cramps—were ameliorated almost at once; the skin grew warm, the pulse rose, the surface, previously clammy and shrivelled, assumed its natural condition, and in some instances the patient slept soundly for ten or twelve hours, the bowels remaining undisturbed during the entire time. These effects, however, only followed when the atropia was used in sufficient quantities to produce the specific scarlatina rash, dry throat, and dilatation of the pupils.—*The American Practitioner*, July, 1873.

MORPHIA IN ACUTE URÆMIA.—Dr. Alfred Loomis asserts that morphia can be administered hypodermically to some, if not to all, patients with acute uræmia, its almost uniform effects being—1, to arrest muscular spasms by counteracting the effect of the uræmic poison on the nerve-centres; 2, to establish profuse diaphoresis; 3, to facilitate the action of cathartics and diuretics, especially the diuretic action of digitalis. It must be given in sufficient quantities to control convulsions, as neither the contraction of the pupils nor the number of respirations is a reliable guide in its administration.—*New York Medical Record*.

MISCELLANY.

CULTIVATION OF IPECACUANHA.—Dr. G. Henderson, in his report on the Royal Botanical Gardens, Calcutta, published in the *Calcutta Gazette* of June 25, describes the progress which has been made in the cultivation of ipecacuanha. There are now about seven thousand plants either at Rungbee or Calcutta, and no difficulty appears to exist in propagating the plant artificially. The conditions under which it will flourish in the open air have not been as yet determined. Experiments are, however, being made in this direction. Dr. Henderson has also tried to cultivate the *Exogonium purga*, which yields the jalap of commerce, but as yet without success.—*Indian Medical Gazette*.

DR. M. DE CHRISTOFORIS and Dr. Zambelletti, of Milan, announce that their proposal for the study and initiation of a universal pharmacopœia has been accepted by the Executive Committee of the Viennese Medical Conference, and will be brought into public discussion.—*Medical and Surgical Reporter*.

STREET-ACCIDENTS IN LONDON.—These injuries, of which only 1334 were reported in 1866, increased steadily to 1919 in 1870, leaped up to 2445 in 1871, and were 2677 in 1872. Altogether, since 1866 there have been 771 persons killed in the streets and 12,630 persons more or less injured.

CHOLERA.—According to official reports, there have been of deaths from this disease in—

Cincinnati, August 16 to 30,	11
Elmira, N.Y., for August,	1
Evansville, Ind., for four weeks ending August 24,	9
Indianapolis, for August,	40
Louisville, for week ending August 23,	2
St. Louis, for week ending August 23,	9
Wheeling, for August	4

The Sanitarian.

HOW TO SWALLOW A PILL.—*The Chicago Medical Times* is responsible for the following: "Put the pill under the tongue and behind the teeth, and let the patient immediately take a large swallow of water, and he will neither feel the pill nor taste it. In fact, he cannot tell where it has gone; and I have seen them (*sic*) look about the floor to see if they had not dropped it."

THE International Congress of Physicians at Vienna was opened on the 1st of September, by the Archduke Rainer. The subject of vaccination was the first question presented for discussion. In our next number we shall give to our readers, through our own correspondent, an account of its proceedings.

A SOLUTION of five parts of borax in one hundred of water is represented to prevent the putrefactive process in meats for considerable time. Flesh dipped in the mixture and then dried resists the usual process of decomposition.—*The Sanitarian.*

THE death of two members of one family, and the dangerous illness of the remainder, four in number, from drinking the milk of a goat which had eaten *Aethusa cynapium*, are reported to have occurred in the county of Limerick.

MR. JOHN STUART MILL has bequeathed £3000 to any one university in Great Britain or Ireland that shall be the first to open its degrees to women, and to the same university a further sum of £3000 to endow scholarships for female students exclusively.

THE Russian lady medical students have been refused permission to study medicine at the Universities of Strasburg and Giessen by the authorities of those institutions.

LIDIA RODELRENA, a wealthy Russian lady, has just presented to the St. Petersburg Academy of Medicine \$40,000 to endow a department for the medical instruction of women.—*Western Lancet.*

A REAL lover of his race, in view of the approaching era of political speech-making, advertises for some secret and expeditious method of communicating lockjaw.

OFFICIAL LIST

OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U.S. ARMY, FROM SEPTEMBER 23, 1873, TO SEPTEMBER 29, 1873, INCLUSIVE.

BAILY, E. J., SURGEON.—When relieved by Surgeon Magruder, to proceed to Wilmington, Delaware, and report by letter, upon his arrival there, to the Surgeon-General. S. O. 187, c. s., A. G. O.

McPARLIN, T. A., SURGEON.—When relieved by Surgeon Irwin, to report in person to the Commanding General, Department of the Missouri, for assignment to duty. S. O. 187, c. s., A. G. O.

MAGRUDER, D. L., SURGEON.—When relieved by Surgeon Alexander, to report in person to the Commanding Officer, Department of Arizona, for duty as Medical Director. S. O. 187, c. s., A. G. O.

PAGE, CHARLES, SURGEON.—Relieved from duty at Fort D. A. Russell, Wyoming Territory, and assigned to duty at Omaha Barracks, Nebraska. S. O. 140, Department of the Platte, September 12, 1873.

RANDOLPH, JOHN F., SURGEON.—Relieved from duty at Omaha Barracks, Nebraska, and assigned to duty at Fort D. A. Russell, Wyoming Territory. S. O. 140, c. s., Department of the Platte.

IRWIN, B. J. D., SURGEON.—To report in person to the Superintendent of the Military Academy, West Point, New York, for duty. S. O. 187, c. s., A. G. O.

ALEXANDER, C. T., SURGEON.—Assigned to duty as Attending Surgeon at St. Louis, Missouri. S. O. 187, c. s., A. G. O.

WEEDS, JAMES F., SURGEON.—Granted leave of absence for thirty days, on Surgeon's Certificate of Disability. S. O. 204, Department of Dakota, September 12, 1873.

WOLVERTON, W. D., ASSISTANT-SURGEON.—Granted leave of absence for thirty days. S. O. 186, c. s., A. G. O.

BROWN, HARVEY E., ASSISTANT-SURGEON.—Assigned to duty at Key West, Florida, as soon as his services can be dispensed with at Fort Jefferson, Florida. S. O. 148, Department of the Gulf, September 12, 1873.

RETURN OF DEATHS AND INTERMENTS IN PHILADELPHIA FROM AUGUST 30 TO SEPTEMBER 27, 1873.

DISEASES.	Adults.	Minors.	DISEASES.	Adults.	Minors.
Abscess.....	3	...	Erysipelas.....	1	1
Aneurism.....	1	1	Fatty Degene'n Kidneys.....	1	...
" of the Aorta.....	1	...	Fever, Catarrhal.....	...	1
Apoplexy.....	12	...	" Congestive.....	...	1
Asphyxia.....	5	5	" Gastric.....	...	2
Asthma.....	3	1	" Remittent.....	1	1
Burns and Scalds.....	4	4	" Scarlet.....	...	6
Cancer.....	4	...	" Typhoid.....	19	11
" of Breast.....	5	...	Fracture of the Spine.....	2	...
" Face.....	1	...	Gangrene.....	1	2
" Liver.....	3	...	Gout.....	1	...
" Oesophagus.....	1	...	Hemorrhage.....	4	2
" Prostate.....	1	...	" Bowels.....	3	...
" Pylorus.....	2	...	" Lungs.....	3	...
" Rectum.....	2	...	" Nose.....	1	...
" Stomach.....	3	...	" Uterus.....	1	...
" Tongue.....	1	...	Hernia.....	4	...
" Uterus.....	4	...	Inanition.....	2	22
Casualties.....	16	6	Inflammation of Brain.....	8	27
Cerebro-Spinal Meningitis.....	1	4	" Bronchi.....	4	4
Cholera Infantum.....	80	...	" Heart.....	1	...
" Morbus.....	2	1	" Kidneys.....	1	...
" Sporadic.....	1	...	" Larynx.....	1	...
Cirrhosis of Liver.....	4	...	" Liver.....	2	1
Colic.....	1	...	" Lungs.....	16	11
Compression of Brain.....	1	...	" Peritoneum.....	6	1
" Spine.....	1	...	" Spine.....	1	...
Concussion of Brain.....	1	...	" Stomach & Bowels.....	9	21
Consumption of Bowels.....	1	...	Intemperance.....	3	...
" Lungs.....	129	22	Intussusception.....	...	2
Congestion of Bowels.....	1	1	Jaundice.....	1	1
" Brain.....	14	18	Laryngismus Stridulus.....	...	1
" Lungs.....	2	6	Mania a potu.....	1	...
Congestive Chill.....	1	...	Marasmus.....	2	90
Convulsions.....	3	43	Measles.....	...	1
" Puerperal.....	2	1	Murder.....	2	...
Cramps.....	1	1	Necrosis.....	2	...
Croup.....	6	...	Neuralgia of the Heart.....	1	...
Cyanosis.....	5	...	Obstruction of Bowels.....	1	...
Debility.....	31	36	Old Age.....	41	...
Diarrhoea.....	11	7	Paralysis.....	10	1
Diphtheria.....	3	3	Poisoning.....	1	1
Disease of Brain.....	12	2	Pyæmia.....	4	...
" Heart.....	23	3	Scrofula.....	2	1
" Hip.....	...	1	Softening of Brain.....	3	...
" Kidneys.....	8	...	" Stomach.....	1	...
" Liver.....	2	1	Sore Mouth.....	...	2
" Stomach & Bowels.....	1	...	Still-Born.....	...	66
Dropsy.....	16	...	Strangulation.....	...	1
" of Abdomen.....	1	...	Suffocation.....	1	3
" Brain.....	1	6	Suicide.....	2	1
" Chest.....	1	...	Syphilis.....	1	1
" Heart.....	2	...	Tabes Mesenterica.....	...	4
Drowned.....	7	5	Teething.....	...	2
Dysentery.....	10	4	Tetanus.....	1	6
Effusion on Brain.....	3	...	Ulceration of Stomach.....	1	...
" Heart.....	1	...	Unknown.....	2	2
Emphysema.....	2	...	Wounds, Gunshot.....	1	1
Epilepsy.....	6	...			

TOTALS..... 551 578

SATURDAY, OCTOBER 11, 1873.

ORIGINAL COMMUNICATIONS.

APHONIA.

BY ANDREW H. SMITH, M.D.,

Surgeon to the Throat Department of the Manhattan Eye and Ear Hospital, N.Y.

(Concluded from page 3.)

THE treatment of unilateral paralysis depends upon the cause. When from disease of the brain, no treatment is likely to be of any avail. When caused by toxæmia, in addition to general treatment adapted to the condition of the system, good effects may sometimes be obtained by direct electrization. In Mackenzie's electrode for this purpose the poles are connected with two olive-shaped points separated from each other about a quarter of an inch. This instrument is brought as near as may be into contact with the affected muscle, when, by pressing a key, the current is made to pass from one point to the other of the electrode through the intervening tissue. This has been found more successful than when one of the poles is applied outside of the neck.

In some of these cases, irremediable changes having taken place in the muscles themselves, no treatment will be of any service. In general the prognosis is favorable in proportion as the case is recent, chiefly for the reason that, there being no action whatever of the muscles, atrophy is almost certain to take place in the end.

Bilateral paralysis of the adductors is rarely the result of interference with the laryngeal nerves by causes of organic origin. It may, however, be caused by disease of the medulla affecting both lateral tracts.

But in by far the greater number of cases it is purely functional, if this term is ever allowable, and the resulting aphonia is called functional aphonia.

In this disease there is no apparent change of structure either in the larynx or in the nerves which supply its muscles. There is simply a paralysis of one or more of the muscles, which has no appreciable anatomical change to account for it. From its frequent association with hysteria, it is often called hysterical aphonia. Yet it is by no means confined to this class of patients. Its pathology is very obscure. The muscles are intact, the nerves are perfectly competent to transmit the nervous influence from the brain, and the brain is perfectly competent to originate the influence. Still the patient is utterly unable to bring the muscles into action until the spell is dissolved either spontaneously or by some external agency, when all at once the parts resume their natural function.

This form of aphonia is apt to come on suddenly, as the result of fright, anger, or other emotional excitement, or even without any apparent cause. Very often it will occur during the menstrual period, and sometimes for months together each return of the catamenia is regularly accompanied by loss of

voice. This intimate connection between the uterus and the larynx is shown also by the fact that some female singers are obliged to make their public engagements in a way to exclude the menstrual periods, as at that time they are unable to sound the higher notes.

The voice has always a whispered character, but its loudness varies in different cases, and at different times in the same case. Sometimes the voice is almost wholly suppressed, at others there is a loud whisper which may be heard the length of a large room.

The reflex action of the cords is but little impaired, and, as a consequence, coughing and sneezing are distinctly laryngeal. This is a diagnostic point of great value. In many cases the lips seem to be partly paralyzed and do not exhibit their natural play in speaking. With the return of the voice the usual mobility is restored.

The laryngoscopic appearances in this disease vary according to the muscles affected, but are comprised chiefly in four varieties.

In the first *all* the muscles of phonation are paralyzed, and when phonation is attempted the cords remain perfectly motionless. The glottis is widely open and has a triangular form.

In the second there is paralysis of the lateral crico-arytenoids. On attempting to pronounce a vowel sound the arytenoid cartilages are drawn towards each other by the arytenoideus, but they do not rotate; and hence the glottis assumes a lozenge shape.

In the third form the arytenoideus proprius is paralyzed. When phonation is attempted, the arytenoid cartilages rotate and the ligamentous portion of the glottis is closed, but a triangular opening is left posteriorly.

In the fourth variety there is paralysis of the thyro-arytenoids. The posterior third of the glottis is closed, but an elliptical opening remains between the ligamentous cords.

This affection will generally terminate in recovery after a variable time, even if left to itself. And in this case the voice comes back as suddenly as it left. On attempting to speak, the patient is surprised to find that instead of a whisper there is a full laryngeal tone, though the voice may still be hoarse.

Although the voice generally returns of itself, the aphonia is sometimes very persistent. Mackenzie mentions a case which he cured after it had continued ten years. And in a case of my own, published in the *New York Medical Journal*, April, 1873, the duration was six years and a half. Yet there is scarcely any other affection of the larynx in which treatment is so certainly and, as a rule, so promptly successful.

Almost any application to the larynx which creates considerable spasmodic action may be successful,—immediately restoring the voice. Sometimes the mere introduction of an instrument into the throat, as, for instance, the laryngeal mirror, will produce this effect, provided the patient be impressed with the idea that it is expected to do so. The inhalation of ether or chloroform to the stage of excite-

ment will generally set the patient to talking, and the voice will remain after the effect of the anæsthetic has passed off.

But by far the readiest means is the application of electricity directly to the cords. The best instrument for this purpose is Mackenzie's laryngeal electrode. This consists of a simple metallic staff, bent at the proper angle, and covered, except at the point, with some insulating material. An eye in the handle is connected with one of the wires of the battery, and by depressing a trigger attached to the handle is made to communicate with the staff when the point of the latter is in position. The other pole may be held in the hand or placed upon the throat over the larynx.

As a general rule, cases of not more than a few weeks' standing may be relieved in this way at the first sitting. Cases of longer duration sometimes require several sittings, or even perhaps weeks of treatment, to entirely restore the voice.* It is well to repeat the application two or three times on each occasion, and not to allow more than two or three days' interval between the sittings.

The daily application of electricity to the throat, externally, for a week or two after the voice is restored, is useful to prevent relapse, to which there is a strong tendency.

Though functional aphonia is most frequently seen in women, and during the period between puberty and the menopause, I have seen several cases in which it occurred in men.

It frequently follows upon congestion of the larynx from cold, in which case the aphonia is at first organic, but remains as a purely functional disease after the congestion has disappeared.

During the spring of 1862 I had a soldier under my care who had taken a severe cold from standing on guard in a drenching rain. The cold affected the throat, producing hoarseness, which soon passed into complete aphonia. A few days of treatment relieved the inflammatory symptoms, but the aphonia persisted for three or four weeks. At length, as an experiment, I introduced into the throat a probang loaded with tincture of iodine, which produced a good deal of coughing and spasm. After the application he returned to his tent, and in a few minutes, having occasion to speak to one of his comrades, he found that his voice had fully returned. From that time forward he had no further difficulty.

An acquaintance of mine, also in the army, became aphonic from a similar cause, and remained without his voice for a period of eighteen months, when it returned suddenly and perfectly, of its own accord. Doubtless, had electricity been applied in the outset, at least seventeen of the eighteen months of aphonia might have been spared him.

Another case now under my care illustrates in a marked way many of the peculiar features of functional aphonia.

Mrs. C., aged about 34, married eleven years, but

has no children, is of a highly nervous organization, but yet a person of strong mind and unusual self-control, in everything directly the opposite of what is generally termed *hysterical*. Has no other symptoms of uterine disease than somewhat profuse menstruation, and sterility. For the last two years has had a tender spot between the scapulæ, with the usual attendant symptoms, constituting a typical case of spinal irritation.

Two years ago she took a severe cold, followed by a distressing cough, sore throat, hoarseness, and finally aphonia. The sore throat and aphonia persisted for two or three weeks after the severity of the cough had passed. The voice then came back suddenly, but after two weeks was again lost, and remained absent for a fortnight. This state of things continued some eight months, the voice being present and absent alternately for from two to four weeks at a time, the general health meantime continuing in a most unsatisfactory condition, notwithstanding the use of every means to build up the nervous system. The attacks of aphonia occurred with great regularity with each menstrual period, and occasionally in the intervals. When the voice returned it was generally suddenly, without any apparent cause. During all this time stimulating applications were frequently made to the larynx during the aphonia, with the hope of restoring the voice, and electricity to the outside of the throat was thoroughly tried, but all to no purpose. Electricity directly to the cord was tried on one occasion, but was unsuccessful, and excited so much opposition on the part of the patient that its further use was deferred. About eight months, however, after the first attack, it was again tried, and was successful at the first sitting, as it has been on every occasion since. From November, 1871, to the present time, the patient has never retained her voice longer than three weeks, and has lost it on an average every ten or twelve days. She has a battery and a laryngeal electrode at her house, and as soon as her voice is lost she sends for me to restore it. A singular point is that while the voice is absent all her other symptoms are greatly aggravated. She especially suffers from a sense of weight and oppression about the upper part of the sternum,—a form of *globus hystericus*, I presume,—which is immediately relieved when the voice is restored. That the loss of voice is not the result of a hysterical access of which this *globus* forms a part is shown by the fact that the aphonia generally comes on first, and that with its removal the sense of oppression in the chest is also removed.

The return of the voice, whether spontaneous, as it still sometimes is, or artificially induced, is always preceded by a peculiar sensation in the throat, which the patient describes as a "breaking away of something." She always knows that she can speak before she makes the attempt.

The attacks of aphonia are almost always consequent upon some unusual exertion. Attendance at church, for instance, is nearly certain to entail loss of the voice before the day is over. A singular circumstance is that three times out of five the voice disappears while at the dinner-table.

* In my case before referred to, in which the aphonia had existed for six years and a half, the treatment was continued for six weeks before the voice was fully restored. There was a complication of lead-poisoning, however, affecting the arytenoides, an earlier recognition of which would have materially shortened the treatment.

At one time I procured for her a galvanic neck-lace, as recommended by Gibb, and it certainly did benefit her for a time, the attacks being much less frequent; but it soon lost its effect.

Sometimes in these cases of functional aphonia the voice may be restored by a strong mental impression. A striking instance of this occurred in a patient, a young girl, whom I saw some thirteen years ago in a small town near Philadelphia. She had curvature of the spine, and in addition to this there had been an abscess somewhere near one of the kidneys, which discharged through the vagina, leaving a suppurating cavity from which there was a constant drain of pus. She was paraplegic and aphonic, with marked hysterical symptoms. Shortly after I saw her, the notorious miracle-worker Newton came to the town, and, being told of the case, went to the house, and, entering suddenly into the room, fell upon his knees near the door, and prayed in a most impressive manner that the Almighty would give him power to relieve the sufferer. He then advanced to the bedside, and, taking the girl by the hand, said, with great earnestness and solemnity, "My child, you can speak: tell me your name." This she did immediately, and from that time forward retained her voice.

I have purposely left what few remarks I have to make upon the pathology of functional aphonia until after relating the above cases, for the reason that they illustrate a distinction which I think important, and which, so far as I know, has not heretofore been made.

It appears to me that as to its pathology functional aphonia is divisible into two forms, in one of which there is, to use the words of Dr. Cohen, "a defect of innervation at the points of ultimate distribution" of the nerves, and in the other a defect of the will. With the first I would class such cases as follow upon organic troubles in the larynx, and such others as are plainly reflex in their origin. In these cases local treatment is not so promptly efficient as in hysterical cases, but it almost always succeeds in the end. Mental impressions, as they are not an exciting cause of the aphonia, are powerless to restore the voice.

In this form the voice when first restored is usually weak and hoarse, but it improves with use and soon regains its normal tone.

In the second or hysterical form the fault is in a defect of the will, of which the patient is unconscious. She thinks she is making a bona-fide effort to speak, but in reality no motor impulse is originated in the brain. But let her be impressed with a belief that she can speak, or with an overwhelming desire to speak, and the power to do so is found to be present. Now, if there were a condition of the nerve at its distal extremity which unfitted it for transmitting a motor impulse, it is clear that no cause acting proximally could produce any effect. It is in these cases that strong mental impressions sometimes effect a cure, as in the case last narrated. The simple introduction into the fauces of any indifferent instrument, as, for example, a laryngeal mirror, with the assurance that it is designed to recall the voice, will often prove effectual, while the same manipulation without such assurance would pro-

duce no effect. The condition is precisely analogous to that in hysterical paralysis generally, which, we all know, can be overcome whenever a sufficient motive for action is presented.

It is in this class of cases that the inhalation of chloroform often restores the voice. It acts simply by causing the patient to forget the idea that she cannot speak, when the natural inclination to talk obtains the ascendancy.

The restoration of the voice is usually complete from the first,—the first word uttered having a clear and natural tone.

At first sight it appears strange that in functional aphonia the muscles of phonation do not become atrophied by years of inaction. But this is explained by the fact that the reflex actions of sneezing, coughing, etc., and also the movements of the glottis which accompany respiration, still continue, and constitute sufficient exercise for the muscles to prevent atrophy, forming a contrast in this respect with what takes place in unilateral paralysis, where all motion of the affected muscles is usually suspended.

Paralysis of the crico-thyroid muscles, while it usually results in dysphonia only, occasionally causes complete loss of voice. This affection is most commonly the result of over-straining the voice, particularly in the higher notes. It is characterized by relaxation of the vocal cords, which, when the case is well marked, are seen by the aid of the laryngoscope to be swayed by the passing current of air in inspiration and expiration, bellying downward and upward. The free margin of the cord is often wavy instead of straight.

The treatment consists in absolute rest—that is, absolute silence—for a time, and the use of electricity. As the crico-thyroid muscles lie in front of the larynx, covered only by a thin layer of soft parts, it is easy to reach them with the electric current by applying the poles externally. There is an advantage, however, in introducing one of the poles into the larynx in contact with the inner surface of the thyroid cartilage, as the current is then compelled to pass more directly through the muscles. The cure cannot be expected to take place as speedily as is generally the case in paralysis of the adductors.

THE THIRD INTERNATIONAL MEDICAL CONGRESS.*

HELD AT VIENNA, AUSTRIA.

Reported by FREDERICK W. RUSSELL, M.D.

THE first gathering of the Congress occurred Sunday evening, August 31, when such delegates as were in the city, with their wives and lady friends, assembled in the pleasant dining-room of the Grand Hotel and dined together in a social and informal way. Companies of friends gathered at the various tables and passed several hours in social

* In order to have our report of the Viennese Medical Congress as fresh as possible, we have allowed it to displace in our present issue the clinical lecture and the notes of hospital practice.—ED. MEDICAL TIMES.

enjoyment, while old friendships were renewed and new ones formed.

The first regular meeting of the Third International Medical Congress took place on Monday, September 1, at ten o'clock A.M., in the main saloon of the Jury Pavilion, on the square in front of the Rotunda. Before the appointed hour, some five hundred delegates and members, both civil and military, had assembled, coming from all parts of Europe, and a few from the Western continent. The officers of the day received at the entrance the Archduke Rainer, a tall gentleman with close-cropped gray hair and a handsome blonde moustache, and escorted him, as Patron of the Congress, within the place of meeting. Delaying for a few moments while he exchanged a few pleasant words with such of the delegates as were presented, he then mounted the rostrum, and, with Prof. Rokitsky, Prof. Hebra, Prof. Sigmund, Dr. Schnitzler, and Prof. Benedict on his right and left, read a short address, formally opening the deliberations of the week. In substance he said that it gave him pleasure to welcome the delegates to the capital of Austria, the site of the *Weltausstellung*. The Exposition would be incomplete if it brought only the results thus far obtained, though it has planted a germ for future growth. The questions which the prominent physicians of the world are striving to answer are truly international, having in view the well-being of all. Though they heal the sick, the most pressing question of the time is the *preservation* of health, the prevention of disease. Civilization brings upon great centres of population great evils and perils, which make the warding off of disease of paramount importance. A new point of view becomes necessary, a new mode of action for combating the evils which threaten mankind. "As you have brought forward these matters and fixed attention upon them, it is your privilege and duty above all others to find and provide help. You will merit new honor from mankind, and add a new glory, and that the best of all, to the World's Fair."

Prof. RATTI, of Rome, delegate from the Italian government, replied, in behalf of his confrères, that the Congress ought to be successful, since it is called to examine into measures which are to conduce to the public welfare and to shape them uniformly for all states. He was strongly of the opinion that a single wise effort on the part of the leaders could establish an international system of public hygiene, pregnant with happiness and prosperity to all generations.

Prof. CARL ROKITSKY, President of the Congress, then rose, and read an address in which he said that it was an honorable task to open these deliberations. He could aim at nothing more than advice concerning the significance of our meetings, and to bring into view the prominent ideas which all had in mind,—in fact, give a roll-call of the work before us. With courteous expressions of regard and hospitality he continued, remarking that associations for hostile purposes, especially of tradesmen to resist oppression, had existed from primitive times. If medical men had long seen the enemy and his devastations before they were induced to

oppose it, it must be observed that it takes generations to lay the foundations for the union of personal efforts, and that organic and inorganic nature must be first investigated in order to understand the foe, to search out its breeding-places, its peculiarities of attack, and its destructive effects. The word international has been adopted because interests of the utmost importance to the people were to be discussed. The people are being convinced that only through united action, both in theory and practice, can the longed-for benefits be obtained. The greater the value of the good sought, the more weighty the deliberations of the Congress. A great value is necessarily given to our discussions, because the press will scatter them far and wide, and each speaker thus reaches a larger audience. He wished not alone those students and writers upon these special subjects to give their opinions, but all to bring forward whatever of experience, of established fact, might be in their possession. We need to find out the whole natural history of the disease, in order to properly manage it. No longer do the people regard these things as sent by an angry Deity; they turn for advice and aid to the physician. And he is at his post, here and there, in hand-to-hand conflict at the bedside, or as a soldier in the war of extermination against the hostility of the foe. We must win the confidence of the people, and induce governments to establish regulations, that the advent of the enemy may not find us unforewarned and unprepared.

Dr. J. SCHNITZLER, the General Secretary, then made an earnest speech, explanatory and historical, read the list of delegates, the permanent officers, and officers of sections, and at an early hour the President declared the session closed.

Officers of the Congress:

His Highness the Archduke Rainer, *Protector*.

Prof. Dr. Carl Rokitsky, *President*.

Docent Dr. Joh. Schnitzler, *General Secretary*.

Prof. Ferd. Hebra, Prof. Sigmund, Prof. M. Benedict, *Vice-Presidents*.

The Executive Committee consists of nineteen members, delegates from the various medical societies of Vienna, embracing such men as Profs. Arlt, Billroth, Braun, Brücke, Schroff, Drs. Witlacil, Winternitz, Auspitz, and Profs. Meynert, Stricker, and Späth. Among the delegates I find the names of Eulenberg of Berlin, Jaccoud of Paris, Profs. Crocq and Warlomont of Brussels, Dr. Günther of Dresden, Prof. Subbotin of Vienna, Prof. Carminhoe of Brazil, Dr. Kovacs of Pesth, Dr. Abdullah Bey of Turkey, and Dr. Castiglione of Rome. But one English physician has thus far registered, and America has almost no representation.

During the sessions of the Congress the following questions are to be discussed in order:

1. The question of vaccination.
2. The proposition of an international law for the prevention of syphilis and the regulation of prostitution.
3. The question of quarantine measures against cholera.
4. The drainage of cities.
5. The proposition for the adoption of an international Pharmacopœia.

6. The proposition for making medical studies uniform, and, as a result, the right of practising the art freely in any country.

Each question is assigned to a president and a committee, who have the position of experts, to outline the subject for discussion, and to formulate the sentiments of the Congress for the ballot. These are printed and distributed before each session, as well as a daily bulletin containing the proceedings of the previous day.

FIRST SESSION.

The first session of the Congress began on Monday afternoon, at four o'clock P.M., in the same saloon, which, owing to the constant squeaking of the bent-wood chairs, and the rather uncalled-for confusion, was not perfectly suited to the purpose. Prof. JACCOUD, of Paris, acted as President, assisted by Prof. HEBRA, of Vienna, and Prof. CASTIGLIONE, of Rome, while, with HEBRA as chairman, Drs. KAPOSI and AUSPITZ formed the committee to whom the general subject had been referred. The question under discussion was vaccination, and the committee circulated a printed brochure containing ten questions, and suggestive remarks, of which the following is a summary:

Question 1. "Shall vaccination be universal, and, if so, shall it be with humanized or original cow-pox virus? How is this to be obtained and kept?" The committee remark that all impartial observations prove that, in respect of frequency, intensity, and mortality, vaccination furnishes an actual if not absolute protection, and that smallpox shows the same virulence towards the non-protected as it did of yore. Secondly, that every non-vaccinated person becomes a source of contagion for others, and multiplies the common danger, and also that no principle is sounder than that the state can protect itself against individuals. Therefore the referees advise *compulsory universal vaccination*. Again, the original lymph takes less certainly, and more often develops a more intense local action, which may be the source of dangerous, even fatal, processes; while humanized lymph can be easily and cheaply obtained in large quantity, less often fails, and rarely develops any unseasonable complications. It were best, then, as a rule, and in all official vaccination, to *use the humanized lymph*. Some persons, however, fear the possible introduction of germs of disease in this way; and in all cases, without further ado, it is best to satisfy their wishes. Next they remark that *the lymph is to be obtained by an incision permitting free escape without pressure, made in a perfected pustule in its prime, when its contents are perfectly clear and limpid, midway between the eighth and tenth days of the eruption*, and only such lymph should be used as comes out spontaneously in clear drops. Lastly, the more immediate the use made of the virus obtained, the more perfect the results. Therefore its reception in a special vial is unequivocally recommended. But generally some days must elapse before it can be used; and, to obviate in some degree this objection, three preservative measures are in use. 1. Simply *drawing it into capillary vials*, which, the committee say, if well done, carefully

sealed, and kept in a cool place, would *preserve the lymph admirably*. 2. *Drying the lymph on the point of the lancet*, a method which preserves for a long time the working power of the lymph, but is *not, on the whole, so advisable*. 3. The method of *suspension of the lymph in glycerin*, a method extensively tried of late, which *offers all the advantages of the first, with great economy of the lymph*.

Question 2. When ought vaccination to be undertaken? At any time of the year, or at a definite time? The committee reply, *time and weather have no counterindication*.

Question 3. What age is the best for vaccination? Provided a child is not in a condition of fever, *it should be attended to as soon as possible*. A child four or five days old can undergo the development of the pustules without marked physical disturbance, and when peculiarly exposed (children of physicians) should be vaccinated *at once*.

Question 4. (a.) What protection does vaccination afford against variola? (b.) How many years does it last? (c.) What is the number of cases of variola among the protected and the non-protected? (d.) How do the statistics of mortality in both classes compare, as determined by the experience of the last decade? The committee confess great difficulty in answering these questions in formal statements. Yet experiment, statistics, and general clinical experience agree that vaccinated persons are less accessible to the smallpox than non-protected individuals. The protection seems to extend over twenty years. Proof is found in the increase of cases of from fifteen to thirty years of age, and the possibility of a second vaccination taking; though it is to be noticed that a small proportion of the cases occurring in those over thirty years old are in non-vaccinated persons. But again, more people are alive between twelve and thirty than from thirty to ninety. Certain it is that many persons preserve to old age their immunity against variola and vaccinia. As regards the number of cases of smallpox in the two classes, it is impossible to clearly state the proportions, owing to imperfection of reports. The greater absolutely the number of vaccinated, the greater relatively will be their share of cases. Wherever the number of living vaccinated persons is known, it must be admitted that fewer of that class have had variola than of the non-vaccinated. Beyond a doubt the mortality among the vaccinated is less than among those not vaccinated. Mortality varies empirically among the protected from 0 per cent. to 11.5 per cent., with average of 4 per cent.; among the non-protected it ranges from 14.5 per cent. to 60.6 per cent., average 30 per cent.

Question 5. Is variola found so frequently in individuals with large and deep vaccination-scars, as in those with small, flat, and obscure cicatrices? No evidence exists on this subject, and, therefore, conclusions are impossible.

Question 6. Is there information to prove that, through vaccination with vaccine lymph, diseases previously non-existing, as tuberculosis, scrofulosis, and rachitis, have been introduced? On this the committee reply that, although the transmissibility

of all known diseases is as yet to be learned, its transmission by vaccination has as yet been proved by no one.

Question 7. Can an existing disease, syphilis for example, be transferred to a healthy subject through vaccination with vaccine lymph from children suffering with hereditary syphilis? Or has every development of a syphilitic pustule arisen from inoculation with fluid taken from a syphilitic eruption? Transmission of syphilis has occurred, beyond a doubt; but the danger is nil if only pure lymph, from a pustule in a person who has no manifest syphilitic taint, is used. Again, it is only when blood or the pus of syphilitic suppuration has been used in the vaccinating that such transmission is possible. Such diagnostic error is easily avoided by any careful physician who is acquainted with the known clinical symptoms of syphilis.

Question 8. Is answered that there are characteristic and, in a clinical sense, important appearances by which syphilis can always be distinguished.

Question 9. (a.) How is the frequently observed imperfect inoculation of vaccine to be explained? At present we cannot explain it; but it has an analogue in the non-susceptibility of certain individuals to prevailing disease. *(b.)* Are we to think a long continuous use of the same lymph brings these conditions into existence? And would it therefore be wise now and then to recommend re-generation of the lymph through cow-pox lymph? Although as facts now stand we cannot affirm a degeneration of power and quality, yet an occasional return to the original lymph would be advisable, in order to obtain better humanized lymph and to allay fear of contagion from the use of a long series of perhaps unhealthy persons.

Question 10. What diseases do we see attacking the vaccinated, which have the same course and issue? Such as follow any other specific irritation of the skin: erythema simplex et bullosam, eczema, lymphangitis, erysipelas, and adenitis suppurativa. But all are rare, and easily avoided by care and the use of pure lymph.

In addition to these questions, information was asked whether there is only one contagion for severe and light cases of variola, *i.e.*, vera, modificata, and varicella, or is each a species of variola, or do variola and varicella only come into existence through a special specific contagion? As regards this question, two of the referees (Hebra and Kaposi) have often announced their belief in the identity of the two, while Auspitz thinks that the experimental data do not allow of a definite answer.

After a few words from the President, Prof. JACCOUD, Prof. HEBRA addressed the meeting, saying, after a few eloquent words of introduction, that the chief duty of a Congress was to make universal whatever of discovery each physician had made. Learned discussion of theoretical points was not wanted, but rather the promulgation of the results of observation made from the proper objective point of view. From these the propositions can be formulated which will conduce to the life and happiness of mankind. Guided by such principles, the discussion will not be barren, and we shall be prepared

either to strongly endorse vaccination, or, if the majority shall decide that it has no protective influence, we shall also be ready not to conceal these views. He particularly wished the question of the identity or non-identity of variola and varicella to be freely discussed, and facts to be fearlessly brought forward: both sides should be treated with like impartiality.

Dr. KAPOSI then read the brochure before mentioned, and a vigorous discussion began. Dr. REITZ, of St. Petersburg, declared himself *opposed* to vaccination, as a result of clinical observations made at the Elizabeth Children's Hospital. From March 9, 1870, to January 1, 1873, he investigated 18,786 children, and found in 8326 vaccinated 133 cases of smallpox, or 1.6 per cent.; and in 10,460 non-vaccinated only 215 cases, or 2 per cent., a most insignificant variation. This, too, at a time of life when the disease is especially frequent. Comparing similar hospital material at Berlin, Vienna, and Brester, of 820 sick vaccinated and revaccinated patients during 1871, 256 died, or 31.2 per cent.; while of 86 not protected, only 23 died, or 26.7 per cent. Again, in the Berlin epidemic of 1871, vaccinated children were affected to a remarkable extent, and the mortality attained the "colossal" figure of 55.3 per cent. The dangers of vaccination he believed understated, since blood-corpuscles are found in the clearest lymph. He introduced a resolution postponing any decision until the next Congress, owing to lack of exact statistics, and requesting such information.

Prof. WARLOMONT, of Brussels, declared vaccination to be indispensable, and that he was a friend of animal lymph, because that offered an inexhaustible source of material, ready at a moment's warning to meet any demand, and because also it offered stronger protection against the inoculation of syphilis. In closing, he said that up to this time the comparative study of humanized and animal lymph did not enable us to decide which of the two is best.

Dr. HERRMANN, of Pesth, was an opponent of vaccination, saying that Jenner in 1799 declared the practice a protection against all kinds of contagion,—an error now exploded. Its friends to-day say that it has reduced the amount of smallpox. From 1776 to 1800, 7017 cases were treated in the London Hospital; from 1801 to 1835, the practice being in vogue, only 3743; in the Vienna General Hospital from 1836 to 1861 there were 8483, and from 1861 to 1863 there were 2162, of which 1300 were in 1862. Also some years of comparative exemption occur, wholly without regard to vaccination. Again, they say that the vaccinated are protected. In the Vienna hospital from 1836 to 1856 there were 6213 cases, of which 5217 were vaccinated, while Gregory had from 1836 to 1851 a proportion of 3.1 vaccinated to 2.7 non-vaccinated. Hebra explains these unfavorable reports by saying that, of 1323 sick with variola vera, 591, or 59 per cent., were unvaccinated, while 732, or 41 per cent., were vaccinated. As regards the assertion that the mortality had been reduced, the speaker said that it must be acknowledged that its protection

lasted for only a few years. To enumerate those sick with the disease ten years after vaccination was a wholly false plan, since this, as other diseases, selects certain ages within which to work. In London since 1858 statistics show a vast preponderance of deaths from variola before the age of ten years, while only 2.4 per cent. occurred from 55 to 65 years. If now the protection was lessened by lapse of years, one would expect exactly contrary statistics. It is, however, a peculiarity of variola that it affects childhood, and after thirty years becomes very much less.

Prof. CROCO, of Brussels, replied that medical statistics are especially deceptive. On the ground of his own experience in the epidemic of 1865, with 4000 cases, he believed the practice did protect. Among the vaccinated the mortality was 2 per cent.; among the others, 70 per cent. Nor could the fact of their slighter sickness be treated as an accident. Vaccination does not absolutely protect, but does lose power with age. He believed there was no scientific difference between human and animal lymph, that its essential properties remained the same, and that a station for the supply of original lymph was of the greatest value in times of need.

Dr. GUNTHER, of Dresden, did not believe that animal was stronger than human lymph, nor that dangerous diseases were conveyed by vaccination. He was strongly convinced that it did protect, and also lessened the mortality, in his experience from 30 per 100 to 3 per 100.

Dr. SCHNEIDER, of Java, from twenty years' trial believed in its protecting influence. An epidemic travelling westward was made to *jump over* his district by universal vaccination.

Dr. MULLER, of Berlin, made an earnest speech, defending his quoted statistics and showing wherein they were imperfect. He could assure the delegates that after inquiry into the case of every death among children in Berlin for a year, he could find not one well-vaccinated child who had died of smallpox. He had no doubt that vaccination is a protection against smallpox. Further, he had never seen animal virus produce severe local action, neither when retrovaccine nor genuine lymph was used. He agreed with the referees. As for himself, he had only experimentally used genuine lymph. He cited the cases of Dr. Pissin, who every year has vaccinated many children again and again to no purpose. Dr. MULLER would use genuine lymph, and the pustules came finely. He cannot, therefore, free himself of the idea that animal lymph is not so sure. He denied that many persons took smallpox between ten and twenty, but the disease begins to increase after twenty years, and it occurs up to thirty and forty years. He willingly used animal lymph to satisfy public opinion, though he did not believe in the idea of degeneration through repetition; he used the genuine lymph which was sent him, kept it in store, mixed with glycerin, and so was ready for a regeneration of lymph at any moment. He wished to say that glycerin-lymph would do more than had as yet been claimed. In no other way could so large a quantity be carried about. In no other way could he have supplied all North Germany in 1870-71.

Dr. EULENBERG, of Berlin, spoke next, referring to the unsafe light which statistics give. He considered that the statistics of vaccination and small-pox were not yet elaborate enough. We must be sure that the technique of the operation is correct, since upon systematic and expert performance of the vaccination depends its success, and a bad vaccination gives only imperfect protection. In statistical reasoning we must be sure that the cases in question were properly vaccinated, that the pustule had passed through its stages regularly and had not been destroyed afterwards. Only hospital and similar material is of use now. Technique, quality, and quantity are all to be factors of the investigation. Marson and Gregory laid great stress upon these, and had established how greatly the number of cases and mortality depended upon the proper enumeration of the sick and the proper condition of the scar. Marson concludes that the mortality among cases with ten scars is nil. But we shall have won a victory when the mortality is reduced to a minimum. If not a perfect protection, remember, "*remedium anceps melius quam nullum.*" "But I consider it a duty of the Congress to speak out loudly and openly how strongly they are impressed with the great importance of vaccination for the public good."

Vice-President HEBRA then closed the session.

SECOND SESSION.

The second session began at 9 A.M. of Tuesday, with Prof. WARLOMONT, of Brussels, for President, assisted by Dr. KOVACS, of Pesth, and Prof. SIGMUND, of Vienna, with Profs. SIGMUND, ZEISSL, and REDER as a committee of reference.

Prof. WARLOMONT is a slightly-built, very handsome gentleman, with a pale alert face, high brow, scanty white hair and side whiskers, and exceedingly courteous bearing. He opened the session with a speech in French, declaring that the question for discussion, "The Prevention of Syphilis with Reference to the Regulation of Prostitution," was one which in Belgium had received the most constant and devoted attention. By the law of 1836 the surveillance of persons and places notoriously devoted to debauchery belongs to the assembly of mayor and aldermen. It takes the proper steps to guarantee security, morality, and public tranquillity. The common council make such rules as they deem necessary and useful. Yet the government is not ignorant concerning the good management of the service. It has considered it a duty to inform the local authorities of the importance of the duty intrusted to their care, and provided an outline or type containing all the details necessary to secure morality and good hygiene. By these means syphilis has been reduced to so small a minimum that it would be extinct were it not for the importations.

The referees brought forward a law for the prevention of syphilis and printed it for distribution. It remarks that the diseases in question, fraught with evils of the greatest moment, are almost everywhere increasing. Since individual efforts fail to restrain it, associated efforts must be made. Better than any other contagious disease its natural history is known.

Wherever medical advice has weight, it is restrained (Brussels, Piedmont). Some degree of success can be obtained by measures directed against it at its very inception; but such measures belong to legislation and government. The great source for the spread of the disease is prostitution in its various forms, but especially that called clandestine. Organized bodies incompatible with marriage—troops, marines, as well as domestics and laborers—favor its propagation. So too with great centres of population, pilgrimages and campaigns, midwives, nurses and attendants, foundlings, certain trades, as glass-blowers, cigar-makers, etc. As social life cannot be readily changed, and means of intercommunication rapidly increase, the simplest and easiest check to the spread of syphilis is legislation. But local legislation is imperfect. Therefore international regulation is the greatest means of relief, analogous to that against cholera, variola, yellow fever, and rinderpest. The details should be in the hands of experts, and the rigid execution of them must be demanded of the authorities. Only experienced and trusted physicians should be called to the work, and all of the profession should be thoroughly trained in the knowledge of the subject, for the sake of driving out quacks, so often sought because of an idea that regulars are ignorant of the disease. They recommend that syphilis should cease to be a specialty of certain physicians, the establishment of dispensaries, gratuitous consultations, hospitals, and public instruction on the nature of the trouble. A law was formulated by Messrs. Crocq and Rollet at the Congress of 1867, discussed at Florence, and laid over until the present meeting. The law which this committee brings forward is as follows:

1. *Organized surveillance of prostitution*, especially the clandestine, with all possible means of assistance, under the direction of a national board of physicians and experts. As examples they point to Brussels, certain towns in France, and Piedmont.

2. *Particular surveillance of venereal diseases* in all corps, civil, military, and marine, all associations the members of which can only with difficulty or not at all be married, as in various trades, secret societies, fairs, markets, and sea-ports.

3. Control of midwives, nurses, and nursery-maids, foundlings, rigorous control of vaccination, circumcision, certain trades, as cigar-making, and *periodical examination of the syphilitic a certain time after treatment*.

4. *Delicate and yet sufficiently clear instruction* on the subject, given by the physicians of corps, companies, and schools, with the insertion of like information in the regulations of such bodies and as regards places for treatment.

5. *Establishment of consultation offices*, in number, form, and arrangement, with regard to the special needs of individuals, so that modesty and social position may be regarded. Obligation of all corporations as well as unions of workmen to provide a sanitary service for their associates, with instructions to their medical men to specially regard syphilis.

6. *Compulsory admission of patients to hospital*, with separation of the notorious prostitutes.

7. *Thorough education of physicians* in the diagnosis and treatment of venereal diseases, the establishment of special clinics, and rigorous examinations before admission to practice.

8. *Appointment of trained and learned physicians* to the supervision of the hospitals, with honorable remuneration.

9. *Severe but just penalties* for all infected prostitutes who neglect to seek medical aid.

10. *Assumption by the state of all the expenses*, where the districts or the sick cannot be obliged, or are not able, to pay.

11. *Periodical international conferences* on the subject.

12. *Election of committees* for the treatment of the various questions which may arise, with the eventual choice of a central committee to take charge of all matters relative to the subject.

In addition to this most interesting plan, an outline of measures to prevent the diffusion of syphilis was presented in French by Dr. PIETRO CASTIGLIONE, of Rome. For interior measures against syphilis he advises complete control of prostitutes, registration, regular examinations, sequestration when infected, absolute suppression of amateur prostitution, power of interference on the part of the state, neither authorization nor prohibition, but absolutely perfect hygienic condition of premises and occupants, and special clinics at the schools of medicine. Also a new idea in the recommendation of an obligatory visit by the physicians of the corps to *soldiers, marines, and crews, to prisoners, government workmen, foundlings, and nurses*, and care of vaccinators and their vaccine, and, finally, the adoption of a uniform international supervision of the whole matter.

A most vigorous and enthusiastic discussion at once sprang up. Prof. SIGMUND, after remarking that the questions were to be discussed from the medical point of view only, and giving some historical details, continued that, owing to the great attention the subject had received, he and his colleagues Profs. ZEISSL and REDER could not hope to bring forward anything new, but were only in accord with the previous Congresses. We must try to discuss measures which are lawful, and, what is of most consequence, keep in view what is most practicable under existing circumstances and with the means at hand. Especially did he strongly recommend the thorough instruction of physicians as regards syphilis, and the publication and wide distribution of information on hygiene, which ought to be communicated to schools, societies, and all bodies of men. If we look over what the last four hundred years have done towards limiting and mitigating syphilis, we ought to be ashamed of its insignificance. But knowledge of imperfections is the first step towards a reform, which he hoped this deliberation might bring about.

Prof. REDER said they had introduced no new points into their programme, since they did not wish to lose sight of the object of their discussions,—the bringing about of an international law, or at least the furtherance of it. But such a law, in the nature of things, could only be in the line of principles. Details must be left to states. So with

prostitution; laws must come from the lawgivers, principles from medical men.

Prof. O. HJELT, of Helsingfors (Finland), said that the circumstances of the northern countries of Europe in regard to syphilis were not without meaning for our medical lawmakers. The idea of the assumption by the state of the cost of medical treatment of syphilis has already been for twenty-five years in practice in Finland: it is therefore well provided with ordinances to prevent the spread of the disease. In the larger districts the control of prostitution has been introduced; sailors returning from abroad are examined, and one has the right to demand the certificate of health from suspected persons. In spite of this, syphilis has increased in the last years to a remarkable extent, and has become a question of great moment. He has treated this subject, in a work shortly to appear, from a sanitary and statistical stand-point, his researches having been carried on in 45,613 cases of disease which he had treated in hospital during the last twelve years. In 1859 there were 2881, but in 1870 there were 6610 cases out of a total population of 1,700,000 souls. In 1859 there were 684 new or primary cases; in 1870 there were 1258. Of constitutional syphilis there were, in 1859, 1725 cases; in 1870, 4223; while of gonorrhœa there were 355 in 1859, and 563 in 1870. For the twelve years there was an average of 2.27 per 1000 treated in hospital. He refrained from explaining the causes of this great increase, denying, however, that immorality is one. He attributes much influence to the out-door habits of life in certain seasons, and their thoughtless hospitality in harboring every vagabond who chances that way. Syphilitic diseases of the skin are very common in Finland. He brought forward other statistics of great interest and value. In Sweden, where there is gratuitous treatment and an assessed tax for the same, from 1861 to 1868 there was an average of 1.24 per 1000 of population (at Stockholm 16.04); in Norway, from 1859 to 1870, a yearly average of 0.86 per 1000 (at Christiania, 7.66); and in Denmark 1.11 per 1000 (in Copenhagen, 14.89). He agreed with the principles of the programme, modified, however, for the exigencies of each country.

Prof. CROQU, of Brussels, gave the historical details of the institution of the present laws in Belgium, which have served as the type for all others since adopted in Europe, and have considerably reduced the amount of syphilis. He regarded it as certain that not all the diseases of the genitalia induced by coitus are venereal.

Prof. CASTIGLIONE, of Rome, agreed perfectly with the twelve points of the official programme. He wished for a legal and strict supervision of prostitution, isolated or concentrated, without the state mixing itself in the internal management of the houses; also to prevent the registration of prostitutes, giving occasion for any unfortunate mistakes, the isolation of infected persons, and clinical instruction.

Dr. ABDULLAH BEY, of Constantinople, agreed perfectly with Prof. SIGMUND and his associates, from his experience at home.

Various gentlemen then advanced verbal changes in the programme, or made short remarks of no great moment, and the recommendations of the committee were in principle accepted. The votes were to be declared on Saturday.

THIRD SESSION.

The discussion of the question of vaccination was resumed on Tuesday afternoon, Dr. ISIDOR NEUMANN, author of the well-known work on skin diseases, being the first speaker. He was a friend of the practice, bringing forward the following results from his experience in charge of a smallpox hospital :

Of 1148 cases there died 140—12.2 per cent.

“ “ were vaccinated 1030

“ “ “ non-vaccinated 91

“ “ “ doubtful 27

vaccinated there died 90— 8.7 per cent.

Of 1030 vaccinated there died 90— 8.7 per cent.
 “ 91 not “ “ 40—43.9 “

It is certain that the vaccinated have the disease less seldom, and in a lighter form. At the time of the last epidemic at Berlin there were 200,000 unvaccinated, 330,000 vaccinated, and 270,000 revaccinated. Of the first there died 14 per cent., of the second 2 per cent., and of the last 0.5 per cent.; from which facts it appears that the disease and death were much more frequent among the non-protected.

Dr. FRIEDINGER, of Vienna, strongly defended Jenner as against Dr. Hermann, giving some particulars of the opposition in England, and the final triumphant success of the practice. In 1856 only two out of five hundred and thirty-nine physicians declared themselves opposed to vaccination. He was in favor of humanized lymph, and vaccinating from arm to arm; agreeing with Dr. Müller, of Berlin, concerning the occasional uncertainty of cow-lymph. Dr. Simon, of London, supports him in this. As regards methods of preservation of the lymph, he did not think highly of the glycerin method.

Dr. MARKOWICI, of Bucharest, declared that the asserted increase of tuberculosis, scrofulosis, etc., from vaccination is untrue. The reason is to be sought in the bad hygienic conditions of the people. The protective power becomes exhausted, wherefore the need of revaccination. Varicella is a different disease from variola and varioloid,—distinguished from both by its pathological characters.

Dr. MEDOVIC, of Belgrade, from his experience in Servia favored enforced vaccination.

Dr. LOWI, of Vienna, recommended animal lymph.

Dr. MAZZON, of Kiew, declared that vaccination, though not absolutely protecting, shortened the disease and reduced its mortality.

Dr. VON BASTAU, of Breslau, quoted favorable statistics from the epidemic of 1871-72, and believed that the protection was so diminished by age that revaccination should always occur about the age of fifteen years. Variola after protection was much less severe.

Dr. GERMAN, of Leipsic, felt obliged by unfortu-

nate experience to declare himself opposed to vaccination. He considered it a prolific source of the communication of syphilis, and read extracts from a pamphlet which he had circulated, in support of his position.

Dr. KNOPFLER was astonished that an active physician could be an opponent of vaccination. On the sick-bed one can better observe the difference between the protected and the non-protected than in statistical tables, which latter lead to many errors. He wished the Congress to declare in favor of compulsory vaccination, under control of specialists.

Dr. KAPOSI then summed up the results of the debate. The opinion was almost unanimous in favor of compulsory vaccination. Only three debaters, and that on insignificant grounds, had declared against it. Their statistics have no weight against the mass on the other side. They have made it appear that the non-vaccinated were safer than the vaccinated. As regards the kind of lymph it appears certain only that both kinds may be used.

Prof. HEBRA then formulated the opinions of the Congress in the following resolution:

"The Third International Medical Congress declares vaccination indispensable, and advises its universal adoption."

Before the vote was declared, the meeting adjourned.

(To be continued in our next.)

ALCOHOL.—Rabow (*Inaug. Diss.*, Strasburg, 1872, and *Centralblatt*, 1873, 336) tries to show, in opposition to previous experiments of Binz and Bouvier (*Centralblatt*, 1871, p. 801), that alcohol does not prevent a febrile rise of temperature. He reports a case of peritonitis from perforation, in which the temperature rose from 38.8° C. to 38.9° within four hours, notwithstanding the administration of thirteen tablespoonfuls of Hungarian wine (equalling about three-fourths of an ounce of absolute alcohol, or an ounce and a half of brandy). This result can hardly be regarded as astonishing, or as furnishing any strong proof against the views previously held. He also took one or two tablespoonfuls of brandy, or twenty-five c. c. of alcohol, at various times, and determined a rise of temperature of 0.01 to 0.03 C.

Daub (*Cbl.*, 1873, 466) criticises the above experiments, by showing that a thermometer held continuously in the axilla for an hour or more often steadily rises 0.03 or more when no alcohol is taken. (That is, the axilla, kept continuously closed, approximates more and more to the interior cavities of the body.) Daub correctly remarks that measurements in the axilla are sufficiently accurate for clinical purposes, but not for physiological experiments, where it is a question of a small fraction of a degree.

Daub further showed that, in a person unaccustomed to alcohol, small doses caused a diminished rectal temperature, as compared with that of other days when alcohol was not used. As the person became accustomed to the alcohol, the result failed to be observed. In two children, one with chronic osteitis and the other with caries of the tibia, no heat-lowering effect took place.

Magnan (*Archives de Physiologie*, 1873, Nos. 2 and 3) gives the results of his experiments upon alcohol and absinthe, as follows:

The immediate effect of alcohol, in a sufficient dose, is, in every animal, drunkenness.

The prolonged use of alcohol provokes, in the dog, besides the drunkenness which follows the administration of each successive dose of the poison, phenomena progressively more marked, which exhibit us the gradual evolution of alcoholism: from the fifth day of the intoxication, irritability and sensitiveness are observed; ten days after, illusions and hallucinations in the night; at the end of a month, delirium night and day.

The prolonged use of alcohol gives rise, in the second month, to trembling, which shows itself first in the hind feet, then attacks the fore feet, and extends progressively to all parts of the body. In no case is an epileptic attack provoked. Finally, the digestive troubles and various complications recall the conditions causing death in men suffering from the chronic effects of alcohol. The anatomical lesions of alcoholism in the dog show, in different degrees, 1st, steatosis (liver, kidneys, heart); 2d, tendency to chronic irritations (meninges, spinal cord, pericardium).

Essence of absinthe, in small dose, determines dizziness and muscular jerking in the anterior parts of the body; in the large dose, it causes epileptic attacks and delirium.

To the first stage of the attack of absinthism (tonic convulsions) correspond dilatation of the pupils, injection of the papilla and fundus oculi, and congestion of the encephalon,—phenomena which do not agree with the generally-accepted theories as to the mechanism of epilepsy.

Animals deprived of their cerebral lobes present, under the influence of essence of absinthe, epileptic attacks and jerkings similar to the convulsive phenomena in those animals which have undergone no mutilations.

After the section of the cord below the medulla oblongata, the intravenous injection of the essence of absinthe provokes, first, a bulbar attack (tonic and clonic convulsions of the head, with foaming at the mouth), and then a spinal attack (tonic and clonic convulsions of the trunk, with expulsion of urine and fecal matter).

The isolated action of each segment of the spinal axis in the regions which it supplies with nerves accounts for the necessary influence of the whole of the organ in the production of the complete attack of epilepsy; and, on the other hand, taking into the account the sudden and immediate loss of consciousness, one must necessarily admit the direct intervention of the whole cerebro-spinal axis in the production of the epileptic attack.—Dr. E. T. Edes, in *Boston Medical and Surgical Journal*.

CHOLESTEATOMA OF THE PETROUS BONE (August Lucae: *Archiv f. O. N. F.*, Band I., Heft 4).—This author has contributed a very valuable and original paper on the above-named subject. He says that in a vast majority of cases of this form of disease a purulent discharge from the middle ear, with a greater or less defect in the membrana tympani, was found. The favorite seat of the disease is the antrum mastoideum.

The author also notes the constant presence with this disease of granulations and polypi developed from the mucous membrane of the middle ear.

Careful microscopic examination of these polypoid excrescences on the mucous membrane of the middle ear showed that in many instances they are covered with thick, pearl-colored epidermis. Transverse sections of the excrescences showed that newly-formed epidermis—that is, *heterologous tissue*—was present. From this it is fair to conclude that purulent inflammation of the middle ear with granulations may, in a way unknown to us, lead to a proliferation of epidermis, the old cast-off cells of which collect in the cavities of the middle ear and form at last a cholesteatoma, or what the author calls "Perlgeschwulst" (pearly tumor.) C. H. B.

PHILADELPHIA
MEDICAL TIMES.
 A WEEKLY JOURNAL OF
 MEDICAL AND SURGICAL SCIENCE.

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EDITORIAL.

NATIONAL SANITATION.

AT the recent meeting of the British Medical Association, Dr. George W. Hastings, Vice-President of the Section on Public Medicine, in the course of an address upon public hygiene, remarked upon the backwardness of our government in these matters. Although evidently moved by the kindest feelings towards us, the truth forced him to the statement that we are far behind England in public medicine. If he had told the whole truth, he might have said much more than this: he might have declared that in the greater part of our country public medicine has no existence,—the American citizen expecting as little and receiving as little protection for his life against the insidious disease or the open-handed pestilence as does the Comanche or the Arab.

It is evident that something ought to be done. Shreveport, New Orleans, Memphis, ay, even New York and Philadelphia, yield up their thousands of unnecessary deaths; yellow fever, cholera, smallpox, chronic arsenical poisoning, sewage contamination, impure air, crowded tenement-houses, rampant prostitution, and the thousand curses which seem the birthright of modern civilization, lie heavy upon the people, who live, and sicken, and die; yet no man says aught, or at least no man having authority. To the fierce, anxious populace that crowd the mustering places after an important election; to those hilarious over political victory or sullen with political defeat;

to the professional politician greedy for himself, studying how he can best lead and control that mass he both fears and despises,—the voting populace,—to such, questions of hygiene seem but trifles, unless indeed when some frightful epidemic rocks a community to its foundations.

Within the last year or so, however, a few physicians have begun to raise their voices over this dance of death, and to call attention to the national recklessness. What shall be done? Are we to have merely local boards of health,—some (very few, however) good and efficient, some useless, some worse than useless—mere masks to hide the rottenness underneath,—each of them caring only for the little community over whose vital interests it is supposed to preside.

Is it not possible to find some plan by which a central authority can be established, at least a binding cord to unite, to harmonize, to render efficient these various bodies?

We cannot but believe that Congressional legislation might, if wisdom were granted our rulers, solve this problem. What that legislation should be is a question of great importance, not to be decided hastily, but only after full and wide discussion.

Many even of the best-informed of our profession have but little idea of what the duties of a hygienic inspector should be. Very few, indeed, have any practical knowledge of the work. Under these circumstances, let us make haste slowly. Office-seeking is possible even in a physician. In some of our great cities certain men have drifted into a more or less complete knowledge of hygiene, and some no doubt have entered upon its study because they smell the battle afar off and see prospects of lucrative and honorable office,—*otium cum dignitate*. Is not that worth a little plotting, a little labor, even a little present weariness of the flesh?

There will come up for discussion by the American Public Health Association, at its meeting in New York in November next, a resolution to the effect that a National Sanitary Bureau should be established in connection with the Interior Department. Is it yet time for this? We know of no one who urges the affirmative to this question, except the very few who may be fairly presumed to have a direct personal interest in the creation of new offices. Rather than make such radical legislation, let us first collect data and opinions bearing upon the subject of public hygiene, and upon the State and national legislation primarily desirable and practicable. And to gain the confidence and support of the medical profession of the country, without which we believe the attempt will fail, we should

like to have these data and reports presented by some competent and, at the same time, disinterested authority.

Judging from what it has done in the way of collecting and publishing information for the profession, we believe that the medical department of the army could do well the preliminary work required; and until this is done we deprecate the urging of hasty legislation on the subject.

The Surgeon-General of the army can avail himself of the services of medical officers familiar with statistical inquiries, and is already furnished by the fine library of his office with much valuable material for this inquiry; and, what is even more important, we may feel sure that the report will not be prepared in the interest of any individual or party.

We believe that in a few years there will be a National Sanitary Bureau at Washington; but we want it kept out of politics, and we do not want its first stages to be under the direction of a department in which the appointments are governed by political considerations, and in which the very first step will be a scramble for office.

CORRESPONDENCE.

LONDON LETTER.

Thousand-Guinea Fees—A Brilliant Career—Epidemic of Typhoid Fever among the Doctors—Poisoned Milk—Mrs. Garrett Anderson.

THE Highland holiday of our London physicians and surgeons has been interrupted by an incident productive of some rather curious illustrations of professional practice and feeling. A very well-known and wealthy man, who has many friends and personal acquaintances among consulting practitioners in London, was seized with a very severe illness at his hunting-lodge. His friend Sir Henry Thompson was near at hand, and was summoned. He came over at once, and, finding his friend dangerously ill, was fain to stay with him in his time of need, and began a close attendance, which lasted for nine days and nights. He was offered, on resigning the case to Sir William Jenner, who was summoned by telegraph, a check for a thousand guineas, but steadfastly refused to take any fee whatever, alleging that he had attended solely as a friend and would not otherwise have undertaken a case of the kind. This is the second time during a few months that the same surgeon has returned a check for a thousand guineas from motives of delicacy. I have mentioned in a previous letter that, knowing that the family of the ex-Emperor Napoleon were not in possession of large means, he returned a fee of a thousand guineas in that case. It is not often

that the same surgeon receives fees so large as to afford the opportunity of dealing with them in a manner so splendidly liberal and delicate, and perhaps it is as rare that he should insist upon doing so. But Sir Henry Thompson is in receipt of an exceptionally large income from the successful practice of his profession, and he is a man of great decision, clearness, and liberality of mind. He is a man who has reason to be satisfied with his career, and of whom we in England have reason to be proud. Commencing the study of surgery rather late in life, and not graduating, I believe, till the age of thirty, he has by the sheer force of intellect and work won his way to the highest eminence and success in practice, to a fine fortune, a splendid social position, and a world-wide reputation. He is still a young man, and his career has been as rapid as it has been brilliant. Nor has it involved sacrifice of other pleasures and pursuits. He is an artist of high attainments,—perhaps the best amateur in oil-painting in England: his pictures are not only well hung at the most difficult and eminent of our exhibitions,—the Royal Academy,—but command a fair market price against those of professional artists, when he is disposed to part with any of them. He is an excellent writer and a man of thoughtful habit on other than medical subjects: his paper in the *Contemporary Review* on the Efficacy of Prayer, addressed to Professor Tyndall, opened up the controversy of which the echoes reached your continent; and he has all the other accomplishments, as a sportsman, etc., which suit the character of an English gentleman. This brief outline of the elements of a singularly successful character and career is only noteworthy as affording encouragement to others and furnishing the materials for contemporary history.

A very singular and disastrous circumstance has occurred in the principal medical quarter of London, which took place at the close of the season (end of July), but of which the effects have been felt throughout August and have not yet died away. The consulting practitioners of London congregate together chiefly in a few streets and squares most centrally situated: this is chiefly a matter of convenience, and to some extent perhaps of fashion. Brook Street, Harley Street, Grosvenor Street, and Queen Anne Street, and the neighboring squares, are the great centres of medical residence for the leading metropolitan practitioners.

Much attention has been directed in London lately to the necessity of procuring a pure and unadulterated milk-supply. More than one company has been started of late years, headed by gentlemen of respectability and position, whose names afforded a guarantee of fair dealing, for the purpose of inaugurating a pure milk-supply on a large scale. One such company, seated near the medical district,—The Dairy Reform Company,—has had a great and deserved success. The precautions taken to prevent the addition of water or the abstraction of cream were very great, and the milk supplied was undoubtedly pure. The doctors largely patronized the company.

Towards the middle of July we were all rather grieved

to hear of successive attacks of typhoid fever in the families of medical men in this district: first it was Dr. Murchison's children, then Mr. Spence Watson's, Dr. Tuller's, Mr. Maunder's, Dr. Buchanan's, Mr. John Wood's, and so on, till it seemed that the whole medical community were to be decimated by typhoid. Nor was there anything to explain the mysterious outbreak. Some of the houses had been not long before most carefully overhauled, and in most of them the sanitary conditions had been well regulated. The sewers were trapped and ventilated, the waste-pipe of the water-cisterns was not connected with the sewers, and all the water was filtered. Presently a clue was suggested. Dr. Murchison's children had been attacked in two sets, and under peculiar circumstances which led him to think, on consideration of certain details, that it was possible that the milk which they drank might be the source of infection. He communicated this suspicion to some of his neighbors, and in the course of an hour or two it was found that nine families in the neighborhood who were suffering from typhoid were all drinking this same milk, and this seemed to be the only condition in common.

The medical officers of health of the district immediately (August 4) communicated these facts to the company, and suggested that they should discontinue the supply of milk from the suspected source. Strong in their consciousness that their milk was pure and unadulterated, the company refused to see in the matter anything more than a coincidence, and declined to stop the milk. Day after day brought, however, fresh evidence. In a day or two thirty-two families were ascertained to be suffering from typhoid fever, of whom thirty were customers of the Dairy Reform Company. Presently a hundred affected families in all, including five hundred cases, were found to be using this milk.

Meantime a government inspector, Mr. J. N. Radcliffe, accompanied by other persons on behalf of the company and the parish, had inspected the farms from which the milk was supplied, had found typhoid fever to exist on one of them, and that the cess-pool was in dangerous proximity to the well in which at least the churns and milk-cans were dipped and washed and then not wiped but left to dry.

A great number of singular examples attested the fact that the milk was indeed the lethal agent. Thus, in the family of a noble lord in Grosvenor Square all the servants drank Dairy Reform milk, and the family milk direct from the estate: five of the servants were down with fever, and none of the family. In another case two servants in a house free from fever and in a distant part of London drank largely, one day when they were out, of the Dairy Reform milk: both were down with the fever, and none of the rest of the household. The family of the Dowager Duchess of Buckingham drank of the milk from the same can which supplied her next-door neighbor, a physician: the fever seized her household; the physician's household were exempt; he had all the milk which came into the house boiled. A number of similar instances strengthened the statis-

tical argument irresistibly, and proved the case. The company had stopped the supply of milk at last, on receiving a telegram from their agent stating that typhoid fever existed on the farm in question (although they had previously been assured by the farmer that there was no disease there whatever). But their long delay in doing so, after the propriety of this course had been suggested urgently by Dr. Whitmore, Dr. Murchison, and Sir William Jenner, has been the subject of severe comment, and is likely to lead to legal proceedings.

As a special item of London gossip during holiday-time, I may mention that Mrs. Elizabeth Garrett Anderson has a baby. Her energetic denial that she was *enceinte* was written to Dr. Sieveking not more than six months before her confinement. So that even the most learned ladies may make mistakes in such matters. And this is not the only mistake involved in that letter; for it was an error in taste as well as judgment, which surprised Mrs. Anderson's friends, for she is a woman of excellent sense and discretion, and her conduct has invariably been such as to win for her respect and esteem. She has lately been elected a member of the British Medical Association.

GLEANINGS FROM OUR EXCHANGES.

LATENT GONORRHOEA IN THE FEMALE SEX.—Last year Dr. Emil Noeggerath, of New York, wrote an elaborate paper, which was published in Bonn, and in which he endeavored to show that "certain diseased phenomena in the female organs which have hitherto been considered as separate and treated independently possess a common basis, from which they, collectively and separately, take their origin,—this being nothing more nor less than gonorrhœa." He undertook to prove that, with very few exceptions, the wives of such husbands as have at any time of life contracted gonorrhœa not only suffer as a consequence from such serious affections as acute, chronic, or recurrent perimetritis, oöphoritis, catarrh of the genital passages, etc., which he believes to be practically incurable, but that they are also, as a rule, sterile, or if they do become pregnant they either abort or bear only one child.

Dr. Noeggerath states that cases of uterine and connected disease are therapeutically divisible into two classes, the one series of cases being readily cured, the other proving excessively persistent, and that the intractable cases are really made so in consequence of the husbands of these patients having at some period of their lives, probably long before marriage, suffered from gonorrhœa. He holds, moreover, that, though time diminishes the intensity of the infection, yet gonorrhœa in the male as well as in the female continues to exist for the whole of life, in spite of apparent cure, and that there exists a latent gonorrhœa in both sexes which may evoke in a hitherto healthy individual either its own symptoms or those of an acute gonorrhœa. Dr. Angus Macdonald summarizes this essay as above, and details seven cases occurring in his own practice which bear upon the subject, concluding from them that "it is sufficiently evident that gonorrhœa in a merely subacute, if not even in an exceedingly chronic and apparently cured—*i.e.* latent—form in the husband, and one which, in the female, produces symptoms merely of a slight leucorrhœa, differing in general appearance little if at all

from ordinary leucorrhœa, may prove a complication fraught with extreme danger to the female, and, in the puerperal stage, one likely to lead to a dangerous and even fatal form of puerperal fever." He believes, however, that Dr. Noeggerath exaggerates somewhat the extent of the influence of gonorrhœa, and that he is mistaken in regarding it as an incurable disease, but thinks that we ought to be a very great deal more guarded in giving our permission of marriage to young men who have within a short period contracted a gonorrhœa or who suffer from a gleet discharge, as he considers it proved to a demonstration that "if a man marry with the slightest shade of a gleet he exposes his wife to the possible risk of great misery throughout her menstrual life, as well as to great risk of death in case she becomes pregnant."

In diagnosing the gonorrhœal form of leucorrhœa, the following points are of great importance. The discharge is yellowish-colored, as if mixed with pus; non-transparent as it flows from the cervix uteri, which is usually surrounded with a deep-red erosion some lines in width; the uterus is tender, more particularly in its lower part; the vulvo-vaginal glands are enlarged; the vulva is sensitive, and there is an inflammatory catarrh of the glands of Bartholini. It is also the rule to see "on separating the labia minora from the remains of the hymen, between the first and the under lateral caruncula myrtiformis, an intensely red point, covered over with glossy mucus, from which, as a centre, a red streak, constantly becoming fainter, stretches upwards and outwards, and, gradually becoming pale, passes over into the color of the surrounding mucous membrane." Inflammation of the urethra at an early stage of the disease is of great value, but it soon passes away; in addition we usually have chronic vaginitis and vaginismus.—*Edinburgh Medical Journal*, June, 1873.

CUTANEOUS CYSTS.—The following is an abstract of a short paper upon "a case of numerous cysts scattered over the body," reported by W. Allen Jamieson in the *Edinburgh Medical Journal* for September, 1873. The patient was a man forty-five years of age. The disease was characterized by some two hundred and fifty tumors, varying in size from a pea to a large nut, scattered over the surface of the body. They were situated immediately beneath the skin, which was freely movable over the smaller but slightly attached to the larger ones. Over most of the tumors the color of the skin was unaltered; over a few it was reddened; while over one or two of the largest it was greenish. Fluctuation could not be detected in the smaller nodules, which were hard and gristly, but was quite distinctly felt in the larger tumors. In appearance they bore a close resemblance to the common wen. The commencement of the trouble dated back one year. The general health had become greatly impaired; the man had emaciated, and was confined to bed. One of the tumors was excised for examination, but during the operation the cyst-wall gave way, and a turbid, brownish liquid escaped, which upon microscopic observation showed numerous epithelial cells. The termination of the case is not reported. A more detailed as well as more accurate account of the disease would have made the case of greater value.—L. A. D.

In the Italian section of the Vienna Exhibition, Dr. Marini exhibits, among an assortment of human feet, hands, legs, arms, and busts of shrivelled proportions and deep-brown color, a large, round plateau, evidently of hard and polished material, which has been likened to stale gelatin or potted boar's head. It is a conglomerate of specimens illustrative of an art invented by him,—the petrification and mummification of human corpses. It was this very Dr. Marini who petrified Maz-

zini, and executed his work so well that the admirers of the arch-conspirator proposed to set up the corpse on the Capitol and save Italy the expense of a statue. The preparations are weather-proof, and will take on high degrees of polish. His mummified specimens, by a process known to him alone, can be restored to their original size and elasticity; while the petrified ones are as hard and possibly as durable as granite. The top slab of the table is composed of muscles, fat, sinews, and glandular substance, all petrified together in a block, the surface of which has been planed and polished until its face resembles marble. Certificates from Nélaton and other distinguished surgeons are attached to the specimen-limbs, setting forth that the limbs in question had, for the satisfaction of the certifiers, been restored to their pristine softness and pliancy by Dr. Marini.—*Lancet*.

DIGITALIS.—M. Gaunot, in the course of a paper published in the *Gazette Médicale de Paris*, on the action of digitalis, says, "When digitalis or digitalin is administered for some time to a man in full possession of sexual powers, these become gradually weakened, the propensities disappear, formation of the liquor seminis diminishes and may at last cease altogether. The anaphrodisiac properties of the drug are the secret of its good effect in spermatorrhœa."

Dr. Little recommends the use of digitalis in febrile cases in which stimulants are either not well borne or are contra-indicated, as where renal affection is present. He has given half-drachm doses of the tincture every three or four hours in typhus, enteric, and rheumatic fevers, with very favorable results.—*Edinburgh Medical Journal*, July, 1873.

OLEATE OF MERCURY IN TINEA CIRCINATA.—Dr. Leonard Cane, in the London *Lancet* for August 16, 1873, recommends the use of the oleate of mercury (ten per cent. strength) as being of particular service in tinea circinata, several applications being sufficient to destroy all trace of the affection. It produces no staining or injury to the skin, nor is the application attended with pain or other unpleasant effect. The preparation is said to penetrate into the sebaceous glands, hair-follicles, and even into the hairs themselves, the mercury being in a state of solution in an oily medium. The penetrating power of the oleate may be increased by adding a small quantity of ether (one part to eight) to it. Dr. Cane records several cases where he has employed the oleate as a parasiticide with satisfactory results. L. A. D.

TREATMENT OF DIPHTHERIA.—Dr. Lolli strongly recommends the following measures, having found them extremely efficacious in a great variety of cases. 1. Avoid cauterizing, except when gangrene occurs. 2. Do not have recourse to bleeding, purging, or emetics, unless you are forced to do so by exceptional symptoms. 3. Diet, according to appetite; but at all events generous. 4. Do not interfere with the functions of the skin; or rather promote them by rest in bed, poultices, sinapisms, etc., and persevere until, from the general or local symptoms, it may be supposed that the morbid principle has been eliminated or destroyed. 5. Use the following mixture as a gargle, or apply with a camel's-hair pencil every second hour, or employ as an inhalation if the disease has reached the larynx:

- R Lime-water, f3iv to xij;
Solution of perchloride of iron, f3ss to f3ij;
Carbolic acid, gr. j to xx;
Honey of roses, f3j.

Shake the bottle well. The mixture may be largely diluted with water or tea and given internally.—*The Lancet*, Aug. 16, 1873.

COMPRESSION OF THE FACIAL ARTERY FOR EPISTAXIS (*Rev. de Thérap. Méd. Chirurg.*, and *Gaz. Med. Ital. Lomb.*, May 17, 1873).—Dr. Marvin, of Geneva, alludes to the disagreeable process of plugging the nares either with Bellois' sound or an elastic urethral sound, and states that he finds the following process preferable: As the blood generally comes only from one side of the nose, and most frequently from the anterior third of one of the nasal fossæ, he merely compresses the corresponding facial artery against the superior maxilla near the angle of the nose. The afflux of blood to the cavity of the nose is thus diminished, and the epistaxis ceases almost instantly. Persons suffering from excessive nasal hemorrhage on the streets, boats, or cars, may thus be readily and promptly relieved.

Bessières, in *La France Médicale*, 1873, recommends plaster of Paris for arresting epistaxis. Plaster is known as a hæmostatic in cases of leech-bites, cuts, and excoriations. The mode of using it in epistaxis is as follows: Sift a spoonful of unslacked plaster through a coarse sieve, place it in a tube of paper or light card-board, and blow it forcibly into the nostril, after having caused the patient to blow his nose.—*New York Medical Journal*.

SIMPLE METHOD OF TESTING PEPSIN.—The London *Lancet* gives the following rule:

Boil an egg for an hour, and cut a portion of the white into the thinnest possible slices. Take a two-ounce wide-mouthed bottle and introduce into it seventy-seven grains (5 grammes) of the sliced-white of egg, one and a half grains of pepsin, four minims of strong hydrochloric acid, and four hundred and twenty minims of distilled water. Place the bottle in a water-bath, and keep it for four hours at a temperature of 100° Fahr. A higher temperature (not exceeding 120° Fahr.) causes more rapid digestion; but it is, perhaps, better to work at about the temperature of the stomach. At the end of the experiment all the albumen should have been dissolved, nothing remaining but minute quantities of fibrous or membranous matters.

NEURALGIA OF THE TESTES.—J. Lazarus (*Wien. Med. Presse*, No. 30, 1872), in regard to the etiology of this affection, enumerates, among the lesser-known causes, chronic disorders of digestion, which are often accompanied by pain in the testicles; also, long abstinence from sexual intercourse, when it is apparently the consequence of a temporary debility of the virile powers, can give rise to neuralgia. Besides paying attention to various casual indications, the author has had remarkable success, in many obstinate cases, by the internal administration of sulphate of zinc (0.2 to 200), three times a day, one tablespoonful, as also hypodermically injected behind the scrotum of a solution of the same salt (0.06 to 12).—*New York Medical Journal*.

BURNS.—Glycerite of lime used in burns is said by De Breyne to soothe the pain and to prevent inflammation or diminish its intensity: it is prepared from recently-slacked lime, one part; glycerin, fifty parts; chlorinated hydrochloric ether, one part.—*Medical and Surgical Reporter*.

ADHESIVE PLASTER.—To render sticking-plaster which has become brittle by age, and has lost its adhesive qualities, adhesive, coat it with oil of turpentine, by means of a sponge, and leave it exposed for a day.—*American Practitioner*.

ASTHMATIC PASTILES.—Take of stramonium-leaves two parts, nitrate of potassa one part. Reduce to a coarse powder, and put up in paper cones weighing half an ounce each.

MISCELLANY.

HOSPITAL CONSTRUCTION.—The final report of accounts for the building of St. Thomas's Hospital has been presented, and some extracts from it are published in the *Times*. The following, which relates to the outlay on the buildings, will be read with interest:

"The total expenditure, irrespective of the cost of the site and of the extensive concrete foundations required by the exceptional character of the ground (half of the site having been reclaimed from the river), may be thus classified:—Mr. Perry's account for the buildings, £346,377; ditto, for sundry wood fittings, £6500; for warming, ventilating, and hot-water services and ward stoves, £11,345; for hydraulic lifts, etc., £5229; for gas mains, pipes, and fittings, £3765; for cooking-apparatus in the principal and other kitchens, £875; lavatory and bath fittings, £1667; stoves and chimney-pieces, £1721; electric communication and bells, £918; engineers' work in the dispensary and other laboratories, and fittings in chemical laboratory, £1788; fire-appliances, £313; laying out the grounds and planting, £2820; sundries, £597—total, £383,948. Of this amount, the architect states that about £30,000 may be taken as the cost of the museum and school buildings, including fittings; £10,000 as the expense of erecting the home for the probationer nurses to be trained under the arrangement with the Council of the Nightingale Fund; and Mr. Currey estimates the cost of the extensive range of buildings required for the out-patients and casualty departments at £33,000, leaving £311,000 as the cost of the hospital, including the administration block, officers' residences, the chapel, the enclosure walls and railings, the river colonnades, hydraulic lifts, and all necessary fittings; and, as the hospital is designed for nearly 600 beds, the cost per bed is a little more than £530, with a cubic capacity of 1800 feet for each patient. The cost per cubic foot of the whole range of buildings has been about 9d., and it may be safely asserted that the cost of the hospital would have been largely increased had its erection been postponed to a later period. (It may be desirable to state the cost of the simple extension of a hospital built on the pavilion principle, with but two rows of beds in each ward, where only ward and nursing accommodation is required. The architect gives as the cost of one pavilion, containing 111 beds, with Sisters' rooms, nurses' dormitories, ward kitchen and offices, excluding, as before, the cost of special concrete foundations, as extracted from tender of Mr. Perry, £29,468: add for extras, being proportion of the actual result, £1472—total, £30,940, or nearly £280 per bed; and adding for fittings, lifts, gas, warming and ventilating arrangements, and electric communication, £4400—total, £35,340, or about £318 per bed.) It may be interesting to compare these figures with the cost of other hospitals. The Herbert Hospital, with a cubic capacity per patient of 1200 feet, cost £320 per bed, exceptional circumstances, as at St. Thomas's, having increased its cost. The Lariboisière Hospital

at Paris, with 606 beds (having but very limited out-patient arrangements, and needing much less extended corridor communication), is said to have cost £440 per bed, with a cubic capacity of nearly 1900 feet per patient. The Hôtel-Dieu at Paris, now in course of erection, is reported to have cost, with the alterations which have been found necessary, £600,000; and if the number of beds be reduced, as proposed, to 400, the cost per bed will be £1500, with a cubic capacity to each of about 2300 feet; but if the original number of 800 be adhered to, the cost will be £750 per bed. Taking, therefore, the average cost of the three great hospitals referred to, the average cost per bed appears to be a little more than £500, and the average cubic capacity 1800 feet, which figures nearly correspond with the results at St. Thomas's. It is believed, however, that the accommodation provided at St. Thomas's in ward-offices, etc., irrespective of the actual ward space, is far larger than at any of the other hospitals referred to; and it must be remembered that this is included in the cost per bed. The professional charges of the architect (including payments of £2252 to the clerk of the works) have been £13,032. The cost of furniture has been £10,084."

PATENT-MEDICINE VENDORS.—An action for libel was lately brought against the *American Agriculturist* by a Dr. Ryan, a patent-medicine vendor. Judge Brady, of New York, before whom the case was tried, gave the following opinion:

"1. A medicine that claims to be an antidote, but is not, is calculated to deceive, and is a fraud.

"2. The seller of a drug or medicine, who vends it with an unqualified statement of its efficiency, must take the consequences if his representations be untrue.

"3. That men should be held to a strict accountability who attempt to practise on the credulity of the afflicted."

We fully concur in this interpretation of the law, that any man who buys a nostrum advertised to cure a certain disease, and is made worse, or is not cured, can bring suit and recover damages from the vendor of said nostrum. We trust that those injured, or not cured, will apply for damages in such numbers as to frighten these unprincipled men into propriety.—*Canada Lancet*.

WHETHER the American politician is or is not a great sinner, he certainly receives such a share of abuse that it is to be hoped he is both pachydermatous and philosophic: to give him due credit, he must be, as he really seems to keep on the even tenor of his way unmoved. It has been reserved for our venerable and dignified cotemporary, the *Boston Medical and Surgical Journal*, to give the "most unkindest cut of all." In a recent editorial full of wrath at the virtuous teetotallers, it says, "We are actually subjected to these daily outrages by a miserable set of pie- and bean-fed politicians,"—an evident allusion to the windy and odorous nature of the food aforesaid. Alas for the flatulent politicians!

MARINE ANIMALS IN FRESH WATER.—At the present day, animals commonly supposed to be essentially marine are occasionally found inhabiting fresh water. In the inland fresh lakes of Newfoundland, seals, which never visit the sea, are common and breed freely. The same is the case in Lake Baikal, 1280 feet above the sea-level, in Central Asia; and, though these facts bear but slightly on my present subject, seals being air-breathing mammalia, yet in the broad mouth of the Amazon, far above the tidal influx of sea-water, marine mollusca and other kinds of life are found, and in some of the lakes in Sweden there are marine crustacea.—*Prof. Ramsey, in Popular Science Monthly for September*.

EXTRAORDINARY SWIMMING.—Mr. Maurice H. Richardson, of Fitchburg, a Harvard graduate of the present year, has just performed the extraordinary feat of swimming all the way from the stone pier at Falmouth across to Martha's Vineyard, a distance of seven miles and a half, in two hours and fifty-five minutes. A friend escorted with a boat, but gave no assistance. Our informant had the facts from Mr. Richardson himself. He has received an appointment as teacher in the Salem High School.—*Middlesex Journal*.

SIR HENRY HOLLAND closed his delightful volume of "Recollections," last year, with observing that the foreign journeys which he had been in the habit of taking annually for fifty years were probably at an end, and that "in future" (he was eighty-five as he wrote) he should restrict himself to a narrower circle. He has changed his mind, however. The gallant doctor has just left London on his ordinary two months' tour, for a place as distant from his home as Nijnii-Novgorod, where he trusts to see for himself a fair of which every one who knows anything of Russia has heard.—*Boston Medical and Surgical Journal*.

RETURN OF MENSTRUATION IN A SEPTUAGENARIAN.—Born in 1800, this lady menstruated regularly up to 1859, when this function ceased. In 1868 it again returned, and has now been perfectly normal in appearance and regularity ever since.—*Rivista Clinica di Bologna*, July 25, 1873.—*The Clinic*.

A WELL-MERITED COMPLIMENT.—Our distinguished contributor, Dr. S. Weir Mitchell, was the recipient of a complimentary dinner on his late return from Europe, given by some of his professional brethren.

OFFICIAL LIST

OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U.S. ARMY, FROM SEPTEMBER 30, 1873, TO OCTOBER 6, 1873, INCLUSIVE.

IRWIN, B. J. D., SURGEON.—When relieved by Acting Assistant-Surgeon Shearer, to comply with S. O. 187, c. s., A. G. O.

WATERS, W. E., ASSISTANT-SURGEON.—Granted leave of absence for twenty days. S. O. 154, Department of the Missouri, October 1, 1873.

WIGGIN, A. W., ASSISTANT-SURGEON.—Assigned to duty at Fort Walla Walla, and granted leave of absence for thirty days, with permission to leave limits of Department and apply for an extension of thirty days at Division Headquarters. S. O. 129, Department of the Columbia, September 18, 1873.

SATURDAY, OCTOBER 18, 1873.

ORIGINAL COMMUNICATIONS.

THE THIRD INTERNATIONAL MEDICAL CONGRESS.

HELD AT VIENNA, AUSTRIA.

Reported by FREDERICK W. RUSSELL, M.D.

(Concluded from page 26.)

FOURTH SESSION.

THE fourth session of the Congress began at 9 A.M. of September 3, with Dr. GUNTHER, of Dresden, for President, and Dr. TOMASSICH and Dr. DRASCHE for Vice-Presidents, with Dr. OSER, Dr. WITLACIL, and Dr. DRASCHE, as a committee of reference. The question under discussion was, "The Subject of Quarantine, with Particular Reference to Cholera."

A little four-page sheet of suggestions and propositions was distributed by the reference committee, of which the following is a brief summary:

The cholera conference at Constantinople in 1866 had declared for the universal adoption of quarantine against cholera, because that incontestably offers a strong guard against the entrance of the plague, when conducted on a rational basis and in accord with the demands of science. Moreover, the present rules of quarantine are of less injury to commerce than the loss produced by a single invasion of the disease. Cholera must be fought at its place of origin before the process of extension begins. Regulations must be established upon principles which govern its transmissibility. Sanitary lines, though troublesome in a crowded population, can do much towards preventing the extension of the disease. As a basis of discussion, and in reply to certain questions, they advance the following points:

1. The essential influence of commerce in spreading the disease is undeniable.
2. Cholera is a preventable disease.
3. Quarantine regulations theoretically offer a protection against the spread of cholera.
4. Practically, however, the protective influence is considerably reduced, or quite destroyed:
 - (a.) Because a complete prevention is impossible.
 - (b.) Because there is ample time for the spreading of cholera in all directions between the first cases and the establishment of official control.
 - (c.) Because the time of incubation of the disease is longer than the appointed time for quarantine, and also because a person sick with the premonitory diarrhoea can spread cholera.
 - (d.) Because the escape from quarantine of a single case is enough to incite an intense epidemic.
 - (e.) Because irregular licenses, and false statements of captains and the public, are not to be avoided.
 - (f.) Because in countries with established inland commerce the protection of quarantine is one-sided, and therefore useless.
 - (g.) Because, as inland trade increases, and the

net-work of railroads brings us nearer to the home of cholera, the power of quarantine must steadily decrease.

(h.) Because the hygienic conditions of the quarantine grounds not seldom tend as much to increase the pestilence as to check it.

5. The preceding facts give no clear demonstration of the sure advantage of quarantine. If, however, one country is preserved from the disease in this way, there are others which a much stronger quarantine does not save from fearful epidemics, and others which remain free in spite of notorious relaxation of quarantine.

6. From the great hinderance of quarantine to the interests of commerce, it is a question of the utmost moment to come to a clear decision as to its value. To this end an international commission is to be convened, to discuss these points, to fix upon the places for a sharp oversight, to report on the onward march of cholera, and to attend to the other causes of the spread of the disease.

7. Upon the grounds of these conclusions this commission is to frame an international law, from which no government, without permission of the others, can withdraw.

8. The decisions of the conference of 1866 are concise material for this purpose.

9. The isolation-laws of countries have to cease, at least for Europe.

10. Hospitals are to be constructed in accordance with hygienic laws.

11. The hygiene of trade by land and water is to receive particular attention at the hands of governments.

Dr. GUNTHER, after conveying his thanks for the honor conferred, expressed his strong hopes that through united effort a long step on a difficult road might be taken. The question had been restricted to cholera quarantine because the special discussion would be of great value as regards the general subject.

Dr. OSER, one of the referees, then read a long article, of which the following is a summary:

This question, of such intense interest to medical men, has a vast literature of hypothesis, plans for prevention and cure, which cannot stand the criticism of scientific investigation.

As regards the most important question, the influence of commerce, men say that further discussion is unnecessary, and that quarantine and restrictive measures seem useless. Most writers agree as to the vast influence of trade in spreading cholera, only Dr. Bryden, on the ground of Indian observations, coming to different conclusions. The monsoon theory must, among other things, explain how the great epidemic of 1818 travelled from Madras down to Bombay against a prevailing monsoon, why it spread over the whole country without regard to the direction of the winds, and, still further, why in 1865 it spread in every direction from Alexandria into Europe.

Cholera only travels along lines of trade, always passing inwardly from the harbors; and this is one of the best-established facts in our knowledge of the

disease. Since it is not found native outside of India, complete abolition of commerce would be absolute protection against cholera. But trade is not and cannot be suppressed: therefore quarantine cannot be universally protective. Its duration is too short, so that, after passing through quarantine and departing, cholera often breaks out among the passengers. It is even more difficult to restrict in thickly populated states with much internal commerce. Cholera has a preference for the land-routes. A ship offers no favorable ground for the development of a cholera, and ship-epidemics are very rare. Again, quarantine stations are like prisons, which every traveller regards with terror. The result of quarantine, stated by its warmest defendant, amounts to but very little. Witness Greece and America. Though the fact exists that where quarantine is in force cholera is diminished, the speaker asked if there was any proof of a causal relation of both forces. England has suffered less than almost any other country, yet she has never carried out a rigorous quarantine, in the idea that through it alone protection could be obtained. Countries with limited trade by the sea may be able to protect themselves through a strenuous quarantine, but its universal protective influence cannot be deduced from the facts yet presented. We know that commerce sustains an enormous damage, amounting to millions yearly. The Constantinople conference declares it much less than industry and trade suffer through an epidemic of cholera. An exchange of a cholera epidemic for a commercial trouble would be satisfactory to all, but now we put up with both.

The speaker advises, then, an international commission of tried and trusted experts, who shall, without fear or favor, make the most rigid and minute investigations into these questions,—the lines of travel of cholera,—and accurate statistics. The abolition of quarantine without any substitute cannot be expected. Again, what good does it do between two sea-ports where land-communication is carried on? Especial attention must be paid to the hygiene of trade by land and sea. Let us find no fault with the Mecca pilgrims, when we have our Lourdes and Kiew. A vigorous official supervision of all means of transportation, attention to the hygiene of sea-ports and places of entrance of cholera over railroads, are yet wanting. When first the help of all these regulations is obtained, when hygiene lends its aid in the shape of good drainage and good water-supply, and when the state finds that the practical meaning of medicine lies in hygiene, then epidemic diseases will be shut into narrow quarters, and a great obstacle will be presented to their onward progress.

Dr. SCHNEIDER, of Java, considered commerce the etiological force, to which he attributed the often slow progress of cholera and the time occupied in finding its way to America.

Dr. EULENBERG, of Berlin, having watched the march of an epidemic, was opposed to quarantine.

HASSAN EFFENDI said that cholera, commonly epidemic, was endemic on the banks of the Ganges. Travellers from India bring with them the implanted virus, which, under the proper circumstances, develops. Only thus could he explain

the fact of the advent of cholera into Europe since 1868, while no case has occurred in Egypt; further, the epidemic of 1865 was coincident with the arrival of pilgrims from India.

Dr. CARMINHOA, of Brazil, was opposed to quarantine, because it could not prevent the introduction of the disease.

Dr. WITLACIL thought the transmission of cholera was accepted by most physicians.

Dr. LUDWIG GRÖSZ, of Buda-Pesth, declared for the abolition of quarantine, except in the case of the cattle-murrian.

Dr. GIACICH, of Fiume, favored quarantine on the same grounds as compulsory vaccination.

Dr. GREGORIC, of Belgrade, declared himself opposed to quarantine, because it was impossible to carry it out effectually, and because he believed in *the spontaneous development of this species of malarial disease*, and could bring forward cases of its occurrence in completely isolated districts.

FIFTH SESSION.

The fifth session was held September 3, at four o'clock P.M.

Dr. SCHNEIDER was opposed to land-quarantine, and considered the wind a factor in the diffusion of cholera.

Dr. WITLACIL said that a majority seemed opposed to land-quarantine. Two have favored it. Theoretically it is quite right, when one reasons that, as cholera is a transmissible disease, it is well to hinder that transmission and isolate every place where it appears. The facts are that quarantine does not prevent the spread of the disease, is not suited to European circumstances, is too disadvantageous to commerce, and should be abolished. The conditions of Egypt are not like our own. We must deal with our own conditions. Land-quarantine is an idea which it is absolutely impossible to carry out.

The President, Dr. GUNTHER, gave the expressed opinions of the cholera commission of Germany: a complete seclusion on land is impossible, and therefore restrictive regulations are without success.

Dr. HUMANN thought that if international regulations for quarantine on the sea were to be established, a glance at facts already gathered by experience of various countries would be of use. Norway is a country where only sea-quarantine can come into application, but where also, from the circumstances of a wide-spread commerce, a rich experience can be obtained with regard to quarantine.

In the years 1865 and 1867 there were no cases of cholera in Norway. In 1866 there were only 80 cases, of which 50 died. In this year, when cholera was abroad in Europe, no less than 3128 ships, from places where cholera was raging, came to Norway, of which 28 brought persons dead or sick with genuine cholera, and 25 brought suspected cases of cholera. The rules were—medical inspection of every ship which came from a cholera locality, and isolation of completely developed, as well as of suspected, cases.

The ships were brought to a certain locality and

purified, and the passengers at the proper time sent on shore, or the sick kept isolated on board until the cases were ended. Not one ship imported the disease on shore. The cases which did occur were imported. A ship from a non-suspected port having on board a case of cholera-diarrhœa, the disease extended to others of the crew, and to the ships near at hand in the harbor. Another source was a ship not thoroughly inspected. The third set of cases were brought into the mainland from a near district in Sweden; but no wide diffusion of cholera occurred from any. The cases were isolated, buildings thoroughly disinfected, and the system proved to be a protection against the disease.

Dr. GIACICH, of Fiume, declared that a bad system of sea-quarantine would get as many enemies as the land-system. It originated with Maria Theresa, and lasted forty days for each ship, whence the name. We do not know the incubation-time of cholera. Hence we must consider the length of time the voyage has continued, whether the ship is heavy, and what the cargo, whence she comes, and how many men she has on board,—since with a great cargo and numerous passengers the spreading of the disease is to be feared. The speaker believed that cholera diffused itself through the air, as well as from persons and clothing.

Prof. CROCCQ, of Brussels, was an opponent of quarantine, because it is impossible to carry it out practically, and also because cholera has raged no more severely where quarantine was carelessly or not at all carried out than in countries where it was rigorously executed. It should be applied only to ships with the disease coming to ports where it does not exist.

Dr. SCHERZER, on the grounds of a very large private and official experience, considered quarantine not only insufficient, but also inhuman,—indeed, horrible. As the Chinese wall fails to keep out the contagion of European civilization, so will a complete net-work of lazarettos fail to keep cholera out of the country. By the great extension of the means of trade, quarantine is made an absurdity. A traveller embarking at Trieste for the Orient must delay fifteen days in Italy, Syria eleven days, and Constantinople eleven days more, in quarantine. In conclusion, the speaker felt obliged to demand the removal of quarantine in its present form.

Prof. CASTIGLIONE, of Rome, said that the idea that cholera attacked only filthy localities and people was not correct, for in 1854 over 5000 people were carried off in Brescia, the cleanest city of Lombardy, while the wretched Jews' Quarter of Rome escaped. The speaker was in favor of sea-quarantine, not as affording absolute protection, but because in certain cases it could be useful.

Dr. WITLACIL, in a review of the debate, remarked that all had spoken against sea-quarantine as at present conducted, though all believed in its application to a ship with the disease coming to a country at that time free.

The results of the votes then taken were not given until Saturday. The following resolutions were passed by large majorities:

1. Land- and sea-quarantine is to be abolished.

2. Sea-quarantine is to be temporarily continued, however.

3. An international commission for the study of the agencies which spread cholera, and for eliminating them from commerce, as well as for finding rules which shall give greater protection than the present ones, is to be appointed.

SIXTH SESSION.

The sixth session was held on Thursday, September 4. President, Dr. EULENBERG, of Berlin, assisted by Dr. HAMM and Dr. INNHAUSER, with Prof. BOHM as referee. The question was, "The Sanitary Management of a City, with Reference to Drainage and Water-supply."

Dr. BOHM gave the conclusions of the referees, as follows:

1. The purification and improvement of the city must be pointed out as an unavoidable demand from a sanitary point of view, and the study of the question is of the utmost importance.

2. For the conveyance of water to and from the houses, as well as channels for the surplus water, canalization is necessary in every city, and must be established in accord with hygienic demands.

3. The refuse of the inhabitants is to be conveyed away through rational means, in accordance with hygienic laws and the interests of the people.

4. In every case the circumstances of the city, the water-supply, the cost of engineering and management, the capability of paying, etc., must be all regarded.

5. As a rule, a good system in accord with hygienic demands can be made in a cheap and workable way.

6. The carrying off at least partially of fecal material, and of the greater part of the urine, is necessary.

7. Cities ought to engage in the discussion of these questions concerning the purification of the state and city, with the assistance of experts.

The discussion of these points briefly epitomized above was participated in by a number of gentlemen interested in the subject. The previous questions of the Congress seemed of so much consequence that I reported them more fully. Of this I can only say that Dr. ARADI, Prof. WARLOMONT, Dr. FOLWARCZNY, Dr. GRUBER, Dr. INNHAUSER, and others spoke, and in the afternoon session (No. 7 of the Congress) Dr. WITLACIL, Dr. EIGENBRODT, Major NIGRAS, and others.

These points mentioned above were officially adopted by the Congress by a vote of 156 out of 181.

EIGHTH SESSION.

The eighth session was held on Friday, September 5. President, Dr. ABDULLAH BEY, assisted by Dr. CARMINHOA and Dr. WITLACIL, with Dr. JOHANN SCHNITZLER for referee. The question was, "The general subject of Quarantine."

Dr. SCHNITZLER proposed—(1) That the present method of quarantine is untenable on many grounds, especially because it cannot be carried out sufficiently to protect against all epidemic

diseases, and is in daily conflict with commerce. (2) A series of quarantine rules must be provisionally retained. (3) The plan for the moment should be the calling of a permanent commission for the study of epidemic diseases, having in view the eventual establishment of international regulations.

Prof. CARMINHOA proposed—(1) International measures for the purification of the Ganges, the Nile, the Danube, and the American rivers emptying into the Gulf of Mexico. (2) Purification of places according to hygienic laws. (3) Quarantine for such ships only as come from suspected ports, or have disease on board which has broken out within fifteen days from the departure on the voyage.

Dr. WALLNER, of Trieste, Dr. BENEDICT, Dr. AUSPITZ, Dr. SPAETH, and Dr. KAPOSI, also spoke, and the Congress finally declared itself as follows:

Quarantine is to be restricted to the time necessary for the examination and disinfection of ships, crews, and passengers. If there be no sickness on board after disinfection, a free passage to be allowed. If sick persons be found, these are to be isolated, and the ship disinfected, with free passage afterwards.

Against yellow fever and the plague the previous rules remain in force.

The question pressing for solution now is how to change the existing quarantine laws in accordance with the points of view previously set forth.

A permanent commission on contagious diseases is to be appointed for a thorough study of the question in all its bearings, which can bring forward definite grounds for a universal sanitary code of laws.

NINTH SESSION.

The ninth session was held on Friday, September 5. President, Prof. RATTI, Rome; Vice-Presidents, Dr. CAPSA and Prof. BERNATZIK; Prof. BERNATZIK, Prof. SCHROFF, sen., and Dr. SCHROFF, jun., were the referees. The subject was, "The Establishment of an International Pharmacopœia."

On this point the committee, among other questions, asked, Is it possible to take one of the existing pharmacopœias for universal use? If this be declared impossible, can it be expected that a pharmacopœia written expressly for international use can serve the purposes of the various countries satisfactorily, as regards the choice, composition, and peculiarities of the remedies? And again, Can the object which is arrived at in the establishment of an international pharmacopœia be obtained in no other way, and what regulations must be established for the purpose?

The resolutions were declared on Saturday, and read as follows:

1. The Congress recognizes the need of an international pharmacopœia. This must contain the most essential and best-known remedies, the most necessary excipients and corrigents, with a precise description of their qualities and method of preparation; the Latin language to be used in the text, and in the relations of the components the decimal system.

2. The Congress wishes that for the future the metrical system be used in prescribing.

3. The Congress intrusts to the president of the Fourth Congress the organization of an international commission for the revision of the pharmacopœia.

TENTH SESSION.

The tenth session was held on September 5, at four o'clock P.M. President, Dr. RECLAM, of Leipsic, assisted by Dr. HUBNER, of St. Petersburg, and Dr. SCHNELLER. Referees, Prof. BENEDICT and Dr. WILLIAM SCHLESINGER. The question was, "The Social Standing of Physicians."

The questions submitted were as follows:

1. Is the practice of medicine to be free, and in what is this freedom to consist?

2. Is this freedom worth wishing for, and under what regulations is it to be commended?

3. Are there means for checking quackery, and, if so, what?

4. Are there cases where any physician can be called upon to give medical aid?

5. Is the official establishment of a medical tax advisable?

6. How can medical interest be best preserved?

Dr. WILLIAM SCHLESINGER made a long speech on the question, followed by Prof. BENEDICT, Dr. ABDULLAH BEY, Prof. CROCO, Dr. MARCOWIC, of Bucharest, Dr. MEDOVICH, of Belgrade, and others. The Congress declared itself in favor of the first point, but only on condition of similar antecedent and professional education and similar evidence in proof of authority to practise, and emphatically opposed No. 4.

FINAL SESSION.

The final session occurred on Saturday, with Prof. ROKITANSKY in the chair. Speeches were made by Prof. MAZZON, of Kiev, Dr. VAN DER LOO, and Major NIGRAS, who had spoken acceptably before, and made an earnest plea for Philadelphia as the next place of meeting.

Prof. ROKITANSKY gave a short review of the progress of the discussions, and declared the sessions closed.

The Fourth Congress will assemble at Brussels. During the sittings of the Congress a small number of experts in mental and nervous diseases have held daily sessions. Such men as Prof. MEYNERT and Prof. LEIDESDORF, of Vienna, Dr. NOSTER, of Marburg, Dr. WISLOCKY, and others, have met and discussed various points. The question, How can the insane be restored to sanity in the quickest way? was discussed at the first meetings. To Prof. MEYNERT was referred the question, How can we attain a natural method of treatment for mental debility?

A number of monographs and articles on various subjects were distributed among the delegates, or handed to the secretary for future publication.

In connection with the Congress there have been gatherings at the hotels in the evening, various receptions, a banquet at the "Kur-Saal" on Sunday evening, excursions to the new water-works of the city, and a trip by rail over the wonderful Söm-

mering road. Over eight hundred delegates have registered. Among them appears the name Baron Dr. SEYDEWITZ, representing the United States,—a gentleman who informed me that we have no good physicians in America (now that he has left, probably). This is another case of the unaccountable yet splendid mismanagement which has attached to everything we have tried to do here. Almost the only speaker we had at the Congress has been a perpetual disgrace since the Exposition opened, by reason of his riotous living.

The doings of the Congress have come in for a considerable share of criticism. Some articles have handled it without gloves. It is very evident that some questions thought to be already settled are to come up again. If I were to express a seeming sentiment among some of the more prominent members, I should regard it as not, upon the whole, a very satisfactory gathering.

GRAFTING THE SKIN OF A WHITE MAN UPON A NEGRO.

BY G. TROUP MAXWELL, M.D.,

New Castle, Delaware.

I WAS called in February, 1872, to see James Pearce, a negro, who had been shot in the face by the accidental discharge of a gun. The gun was loaded with bird-shot, and, as Pearce was only a few feet from its muzzle, the charge passed through the left cheek almost in as compact a mass as a solid ball, entering just at the outer border of the orbicularis muscle. The shot made a wide and deep furrow through the soft parts, completely severed the masseter muscle in its middle, and escaped at the posterior border of the ramus of the inferior maxillary bone, just below the lobule of the ear. The buccal mucous membrane and the bone were uninjured; but the wound involved all the structures lying exteriorly to them, and, as by retraction of the severed tissues the lateral dimension of the wound was considerably increased, it presented a horrible appearance, the ghastliness of which was increased by the charred and blackened effect of the burning powder.

An effort was made to contract the limits of the wound as much as possible, by approximating its sides as closely as could be done with adhesive strips and bandages; but, notwithstanding all the care that was taken, the sloughing was so extensive that there resulted a deep, disfiguring wound, of irregular shape, and covering nearly the whole left cheek.

To expedite the healing process, and to prevent, as far as possible, the disfigurement of an extensive cicatrix, I proposed to graft skin into the wound as soon as it presented a healthy granulating surface. This proposition having been assented to, I performed that operation in March, about four weeks after the injury was received.

Whilst making preparations for the operation, the idea of grafting the skin of a white man upon a

negro occurred to me; and, having obtained the consent of my patient to the procedure, I clipped from my own left forearm a piece of skin about the size of a dime, for the purpose. I also took a piece from his forearm, intending to graft both white and black skin.

These pieces of skin were divided into small fragments about the size of canary-seeds, and four of each kind were carefully inserted into the surface of the wound.

On the tenth day, the bandages and strips of plaster which held the grafts *in situ* were removed, and six of the eight grafts were discovered to possess vitality and to encourage the hope of success.

Unfortunately, that day, after the dressings had been changed, my patient got on a "spree," and, whilst intoxicated, destroyed four of the grafts. Happily for the success of my experiment, of the remaining two, one was white. These grafts grew finely, extending themselves in all directions, and assisted materially in closing the wound, which was quickly done.

Besides the wish to heal the wound as speedily as possible and with the slightest amount of cicatricial contraction, considerable interest was felt in the result of the experiment—which, so far as I am informed, had never been done before—of grafting the skin of a white person upon a negro. It was a source of gratification, therefore, to witness the growth of the white graft, and I watched its progress with peculiar pleasure. From the size of a canary-seed, it increased to the extent of about a half-inch in its greatest dimensions, and was of irregular form, with narrow points extending into the surrounding black surface.

Meeting Pearce on the road after the wound had healed, I readily distinguished the white patch in the side of his face, twenty to thirty yards distant. Upon examination at that time, dark-colored lines, forming a net-work in the white skin and giving it a purplish tinge, were discerned. These, I supposed, were blood-vessels. These vessels increased in size and number, producing a corresponding deepening of the color of the patch, until by the end of the third month the whole surface of the wound was of a uniform blackness. The white skin had lost its distinguishing characteristics.

Does not this experiment prove that the coloring-matter of the skin, its pigment, which varies in quantity in individuals as well as in races, is due to cells which are developed in the liquor sanguinis, and not to any peculiarity in the cells of the skin itself?

FATAL PERITONITIS FROM RUPTURE OF A PELVIC ABSCESS.

BY A. K. MINICH, M.D.

MRS. H., German, aged 30, mother of three children, after a few days of slight suffering from pain in the lower portion of the abdomen, and for which her husband administered Hamburg tea (the inevitable remedy among Germans), was suddenly attacked with very violent pain in the hypo-

gastric region. As I was not at home, another physician prescribed. About six hours later I found her in intense agony, abdomen tympanitic and painful to the touch, hurried respiration, and rapid wiry pulse. Death followed in about twenty hours.

Autopsy made one day after death, by Dr. Haynes and myself, revealed the following:

Peritoneum injected, showing everywhere traces of inflammatory change. Pus and liquid feces low in peritoneal sac. The empty sac of a large abscess was found upon the upper left side of the uterus, the summit and side of which were partially attached to the colon of the corresponding side.

Treatment after the rupture of the abscess was, of course, unavailing. But had the abscess been discovered a few days earlier and a bistoury passed through the uterine wall into it, allowing the pus to escape via the uterine cavity and vagina, there is no doubt that she *might* have been saved.

2228 NORTH FRONT STREET, PHILA.

NOTES OF HOSPITAL PRACTICE.

UNIVERSITY OF PENNSYLVANIA.

SERVICE OF DR. LOUIS A. DUHRING.

Reported by Dr. ARTHUR VAN HARLINGEN.

DERMATO-SYPHILIS.

THIS man presents an eruption consisting of some half-dozen ulcers, grouped so as to form a semi-circular patch about three inches in diameter, on the arm, midway between the elbow and the axilla.

The appearance of these ulcers is characteristic of the disease: they are crescentic, vary in size from that of a pea to that of a large bean, have a deep, punched-out appearance, and are covered with a sanious, yellowish-gray exudation.

The patient states that he has never had chancre or other symptom of syphilis. He had an attack of gonorrhoea many years back.

About one year ago he noticed a small nodule or tubercle on his arm at the seat of the present eruption, followed shortly after by several others of the same nature, which eventually broke down and formed the ulcers for which he now seeks relief. These ulcers increased in size with remarkable slowness.

In spite of the total absence of any history of a primary lesion or of any of the earlier symptoms of syphilis, there can be no doubt that the sores are due to syphilis and nothing else. We need nothing more than these appearances to make our diagnosis. Should we in these cases rely on always obtaining a history of syphilis, we should often be very much at fault with our diagnosis.

The exceedingly slow course which the disease has pursued in the present case would almost lead us to believe that the patient had been under a course of antisymphilitic treatment; but he assures us to the contrary. We may therefore conclude this to be syphilis of a mild type, entitled to a very favorable prognosis. The patient will take the following:

R Potassii iodidi, ʒv ʒj;

Tr. cinchonæ comp., fʒiv.

Sig.—One teaspoonful three times a day after meals.

Locally the ulcers are to be dressed with unguent. zinci oxid. and kept perfectly clean. Under this treatment we may expect rapid improvement.

[The patient appeared before the class a week later, much improved. The ulcers had lost their previously unhealthy character, and were granulating rapidly.—A. V. H.]

HEREDITARY INFANTILE SYPHILIS.

The history of this little patient is as follows. The mother has never had any syphilitic disease, but the father's record is more than doubtful in this respect, though nothing is positively known. Up to four years ago they had four healthy children; then the woman suffered two successive miscarriages. When this child was born it seemed weak and small, but to all appearance healthy, and no sign of disease manifested itself until it reached the age of four weeks. At that time it began to show unmistakable signs of syphilitic disease.

A "scurf," it is stated, appeared over the entire surface of the body, which peeled off in dry scales. Shortly after "sores" broke out on the head and feet, and the skin about the genitals became excoriated. Meanwhile the child's appetite failed, and it became weak and emaciated to the last degree.

Its condition to-day is decidedly better than when it first came under treatment a month ago, though still characteristic of hereditary infantile syphilis. The skin is sallow and wrinkled, the eyes are hollow, and the skin of the face has a dead, waxy look, with a drawn expression about the mouth. The whole aspect of the child, in fact, resembles that of premature old age and decrepitude.

In addition to these signs of general malnutrition, we have more positive evidences of disease. A scattered papular eruption exists over the body and limbs; there are also pustules about the soles of the feet, desquamation of the skin on the palms of the hands, and one or two small abscesses on the fingers. About the genitals there are, you will observe, a number of well-marked mucous patches. Considerable stuffing up of the nasal passages exists, but as yet there is no discharge. A thin, yellowish fluid oozes from one ear.

A case like this demands prompt and energetic treatment and yet great caution; for a very slight matter will often be sufficient to upset the balance of so precarious an existence, and cause the physician to be unjustly blamed.

The treatment adopted in this case has been as follows. At first baths containing corrosive sublimate were directed. Ten grains of the sublimate were to be dissolved in a wash-tub of water sufficiently warm, so that the little patient might not get a chill in the bath. In this bath the infant was to be immersed for ten or fifteen minutes, care being taken that none of the solution should be splashed into its mouth or eyes.

In many cases this treatment is sufficient. It was continued for about a week in this instance, and then, as the mother became apprehensive lest the child should die in one of the baths, they were discontinued, and another plan was adopted. Inunctions were directed of the following:

R Unguent. hydrarg.,
Adipis, aa ʒss. M.

Of this ointment a piece the size of a pea was to be rubbed well into the skin of the abdomen and other parts of the body alternately, care being taken not to rub too frequently in any one locality, and to avoid abrasions.

Under the use of these inunctions decided improvement has taken place: the child sleeps well, his appetite is better, and his general appearance is much improved. The prognosis, however, can scarcely be called favorable,—the appearance of several large abscesses on different parts of the body showing such a tendency to disintegration of tissues as renders the prospect of recovery slight.

Before leaving the case, let me call your attention to the peculiar whining cry which the child utters from time to time, and which is to a certain extent characteristic.

PHILADELPHIA HOSPITAL.

SERVICE OF DR. H. C. WOOD, JR.

Reported by Dr. J. WM. WHITE.

TYPHOID FEVER—COLD PACKS—RELAPSE—RECOVERY.

HANNAH McF., an unmarried woman, æt. 22, entered the medical wards of the Philadelphia Hospital, December 22, 1872, after having been sick for about three weeks. At the time of admission her pulse was 126, rapid and feeble; respiration 26 and labored; tongue heavily coated and fissured; abdomen covered with rose-colored spots and greatly distended; temperature 104°; bowels opened from three to five times daily, the passages being thin, offensive, and brownish. The patient was very drowsy, slept most of the time, and was wakened with difficulty. She was put on a diet of milk, beef-tea, and whisky, with small doses of laudanum and quinia; her stools soon became less frequent and of a better color, but with this exception there was no change in her condition until the 26th. Her temperature then reaching 104½°, she was placed in a wet pack at 75° twice during the day, and was allowed to remain there for two hours each time. This lowered her temperature 1.5°, improved her general condition, and lessened the severity of her symptoms. She expressed herself as feeling greatly relieved, and said that packing was very agreeable to her. On the 27th and 28th the packs were repeated, but on the latter day she had a profuse uterine hemorrhage, which was only controlled by the tampon, and the packing was therefore discontinued until the 31st. It was then recommenced, but was again stopped on January 2. During this time she suffered somewhat from pain in the chest, with a troublesome cough, and crepitant râles with dullness on percussion were found. Squills were given as an expectorant, turpentine stupes were applied, and the cough and pain disappeared. Until the 28th she was taking an ounce of milk-punch—equal parts of milk and whisky—every two hours, but after the occurrence of hemorrhage this amount was doubled. Her general condition from day to day may be tabulated as follows:

Date.	Packs.	Pulse.	Resp.	Temp.
Dec. 26, A.M.	2	118	27	104½°
P.M.		110	27	103½°
27, A.M.	2	118	27	104°
P.M.		126	29	104½°
28, A.M.	3	126	36	105°
P.M.		114	30	102½°
29, A.M.	0	116	39	104½°
P.M.		126	32	104°
30, A.M.	0	116	30	102°
P.M.		112	30	101°
31, A.M.	2	110	36	103°
6 P.M.		100	27	102°
Jan. 1, A.M.		100	27	100½°
2, "		94	27	98½°
3, "		94	27	99½°
4, "		94	24	99½°
5, "		94	25	99½°

From this date up to the 15th she steadily improved in every particular. On the 15th she had some pains in her bones, and was chilly and restless. On the morning of the 16th she got up and made her bed, having been out of it only once before, and then having

been assisted with great care to sit up a little while. Shortly after going to bed again on the 16th she was seized with a high fever, the pulse became thready and so rapid that it could not be counted, her respirations rose to 50, and her temperature to 105°. She was given two ounces of whisky hourly during the day, and one ounce at night whenever she was awake. A turpentine and fever mixture was also administered. She, however, grew rapidly worse, and became exhausted, stupid, and finally delirious. Packing was again resorted to. She was wrapped in a sheet wet with water at 55°, and in three-quarters of an hour her temperature fell to 103°, but an hour later it had gone back to 105°. After an interval of a couple of hours she was packed with a sheet at 32°. She made no complaint, and did not seem to find it unpleasant, but her temperature was reduced only one-third of a degree. This was late in the afternoon. The following morning, January 17, her temperature was still 105°, but her respirations had fallen to 30, and her pulse was only 125, and much improved under the whisky which had been given. About ten o'clock she was wrapped in a sheet at 32°, and kept there for an hour and a quarter, and this was repeated for a shorter time in the afternoon; but on neither occasion was there any distinct fall of temperature. She took an ounce of whisky each hour during the day.

18th.—Temperature 104°; general condition much better than at any time since the relapse. The packing was repeated, and whisky given as before.

19th.—Temperature 102.5°; packing discontinued; whisky given in smaller doses. Improvement was uninterrupted until the 22d, when there was an exacerbation of fever, the pulse rose to 168, and coarse, subcrepitant, sibilant, and creaking râles developed themselves posteriorly in both lungs. She was placed on muriate of ammonia, counter-irritation was freely applied, and she again grew better, until on January 28 her respirations were 30, her pulse was 118, and she was regaining her strength.

She now progressed steadily to complete recovery, and early in March was able to leave the hospital.

PHILADELPHIA HOSPITAL.

Reported by JOHN M. KEATING, M.D., Resident Physician.

CASE OF EPILEPTIC CONVULSIONS AND HEMIPLEGIA IN THE ADULT, APPARENTLY REFLEX AND DUE TO LUMBRICI.

A CASE which recently came under my notice in the medical ward of the Philadelphia Hospital, for the permission to report which I am indebted to Dr. J. L. Ludlow, Visiting Physician, may be of interest to those of your readers who are studying the subject of reflex action.

On the night of July 14, I was called to see a man who had been brought to the hospital a few moments before by a policeman. The officer stated that he had picked him up on the street unable to speak, and that therefore he could get no history from him. When seen by me he was just recovering consciousness, unable to articulate, but he evidently understood all I asked, as he shook his head yes or no to all my questions. His pulse was 90 and strong, and the heart-sounds were loud and normal. He was breathing heavily. The entire right side of his body, except the face, was paralyzed. The paralysis was both of motion and of sensation. He was ordered cut cups to the back of the neck, and about six or seven ounces of blood were drawn. The tincture of aconite root was given in three-drop doses, repeated as indicated, cold cloths ordered to be applied continually to his head, a drop of croton oil administered, and I left him for the night.

Next morning the pulse was beating 75. The oil had had no effect, and a dose of salts was now given. At 5 P.M. he could articulate a few words. He had vomited much during the morning, and the continued nausea was supposed to denote a complication at the base of the brain. Warm water had been freely administered, and he at last with much difficulty threw up a large lumbricus, after complaining of a continued pain in the epigastrium. The temperature of both limbs was the same; the pupils were normal and of equal size. Sensation was returning gradually. He was now able to speak much better.

July 16.—Sensation returning to right shoulder. He is to-day able to speak well. He says he is 33 years old, has never had syphilis, and was *never before paralyzed*. The improvement continued; cathartics were used for several days. Two days afterwards he was able to walk with the aid of a cane. About the fourth day from the commencement he was seized with a violent pain in the epigastrium similar to that from which he suffered when he vomited the worm several days before. This time he vomited nothing. At the end of the first week he had an attack resembling an epileptic convulsion, with marked spasmodic contraction of limbs, which after return to consciousness still affected the right side. There was once more entire paralysis of motion and sensation. After the attack he was cut-cupped, and a purgative ordered. This was followed by the passage of a large worm which was dead when discharged. In two days he was able to walk around the ward with the aid of a stick, sensation completely returned, and motion enough so as to give him almost complete control of his arm and partially of his leg. Anthelmintics were thought to be indicated, and oil of chenopodium was ordered in five-drop doses, followed by castor oil, but no worms made their appearance. Santonin was substituted, with like result. He had several slight convulsions, with but little increase in the paralysis. Bromide of potassium was prescribed, and under it and tonics he rapidly improved until August 11, when he was discharged at his own request, with scarcely any paralysis, and with but little loss of power remaining. These attacks were his first *epileptic fits*.

Upon inquiry I learn the following history previous to his admission to this hospital, through the kindness of Dr. David Maich, Jr. P. S. arrived in Philadelphia on the Baltimore boat, Saturday night (June 21, 1873). Sunday morning, after eating heartily, he started to walk to the country (the thermometer stood at 83° in the shade). The last thing he remembered was crossing the stone bridge on the Germantown Road. He had taken no stimulating drink, as he says he is a temperate man. He was brought to the Episcopal Hospital by a policeman at 11.30 A.M. He was unconscious when admitted. Temperature 98°; respiration slow, labored; no convulsions; pupils were normal. He was treated by ice to head and warmth to feet, whisky, etc. When he rallied he complained of headache.

The next morning he was placed upon twenty grains of bromide of potassium every six hours, and was discharged well on July 14. As the man's case was of much interest, I wished to follow up his history. But he had not reached the destination for which he started when he left us by the 22d of September, as I was informed by the Superintendent of the Howard Home for Disabled Soldiers. It appears that the attacks which brought him to the two hospitals were entirely dissimilar. In the second he was affected with paralysis, the recurrence of which was followed by the passage per anum of a dead worm; and the rapid recovery which enabled him to walk about the hospital within three or four days from the seizure denoted anything but a distinct brain-lesion.

TRANSLATIONS.

RESEARCHES UPON THE PHYSIOLOGICAL EFFECTS PRODUCED BY THE ABSORPTION OF THE SALTS OF SILVER.

By PROF. CHARLES ROUGET. Translated from the *Archives de Physiologie* for July, 1873.

BY FRANK WOODBURY, M.D.

THE experiments heretofore made by a number of observers to ascertain the physiological action of the salts of silver, M. Rouget believes, have yielded incorrect results, because in all of them the agent has been injected into the veins; thus producing accidents, which, although often directly due to the process employed, have been all attributed to the toxic agent.

In the experiments detailed by M. Rouget, on the contrary, this process has been avoided, and the argentic salt has been introduced into the organism by absorption; either from the cutaneous surface or by hypodermic injection into the cellular tissue, into the subcutaneous lymphatic sacs of frogs, or, exceptionally, into the peritoneal cavity. By this means the complications arising from the abrupt introduction of a foreign element into the blood are avoided, and the substance reaches the nutritious fluid slowly and a little at a time by absorption, as in the normal physiological condition.

Considering the question as still undecided, he has experimented upon animals from all the classes of the vertebrata and several orders of the mammifera, even descending to some of the invertebrata, insects, and crustaceans. The experiments upon the amphibia, in the larva and adult states, have been very numerous; the others have always been repeated upon several animals of the same species.

Solutions of the strength of $\frac{1}{100}$ to $\frac{1}{1000}$ of the argentic nitrate were first used; but later he substituted the solution of the chloride of silver or of the nitrate, dissolved in the hyposulphite of soda. The phenomena in batrachians produced by the introduction of the silver nitrate by absorption, approach closely in their appearance to those presented by frogs paralyzed by a feeble dose of curare: voluntary motion is suspended; respiration stops; reflex movements, after having persisted some time, gradually disappear; the circulation alone continues, and is performed with regularity from one-half to two hours. These phenomena of argyric intoxication in batrachians seem to bear no relation to those reported of dogs in whose veins the silver salts have been injected.

After relating a number of experiments, he deduces these general results:

In all the experiments the salts of silver having been introduced by absorption, intoxication occurs later than following injection into the veins.

He has not had a single case of *instantaneous* death, even in a dog in which sixty centigrammes of hyposulphite of silver were injected into the cellular tissue.

Moreover, two centigrammes of the same salt, introduced in the same way, were tolerated by a dog who showed no evil effects whatever, while the same dose injected into a dog's veins by MM. Rabuteau and Mourier produced fatal intoxication in twenty minutes.

At present, two opinions regarding the physiological action of the silver salts seem to exist: the one attributing the phenomena observed to an action on the nervous system (Orfila, Charcot, and Ball); the other, on the contrary, considering them as the result of a chemical change in the blood, producing the bronchial hypersecretion, and, in the sudden deaths, causing arrest of the heart's action by direct poisoning of its muscular fibres (Krahmer, Rabuteau, and Mourier).

In all the animals, vertebrata and invertebrata, the first phenomena declaring the poisoning are, without any exception, the troubles in the functions of the nervous and muscular systems of animal life, from feebleness or torpor to those of the most grave character, complete loss of voluntary motion, convulsions, contractions, and paralysis.

In the second place, appearing with more or less promptitude after the preceding, occur troubles of breathing: a function whose regular accomplishment depends not only upon physical and chemical conditions, but also upon mechanical ones governed by certain nerves and muscles belonging both to animal and organic life. One of the least contestable of the results in these new experiments is that these troubles of respiration, which are always present, are only in two species of carnivora, the dog and the cat, accompanied by pulmonary lesions and bronchial hypersecretion (to explain which others have suggested a chemical change of the blood). In all the other animals the troubles only exist in the mechanical portion of the respiratory apparatus, that is, the muscular and nervous systems, and the lungs are found after death healthy but contracted; a state which declares that in the muscles and nerves of the pulmonary parenchyma there exist troubles analogous to those in the external mechanical portion (convulsions, spasms, and permanent contractions). The special phenomena of hypersecretion, œdema and pulmonary congestion, only observed so far in dogs and cats, can equally be considered as a consequence of the action of the toxic agent upon the nervous system. When observing this access of convulsive suffocation, followed by the expulsion of flakes of bronchial foam, it is impossible not to be struck with the analogy which all this bears to the onset of asthma, especially to *asystole*, which terminates in asphyxia and death. The pulmonary lesions, œdema and congestion, seen in dogs thus poisoned, are the same as those found in asthmatic subjects, especially where death occurs from *asystole*. Besides, in all the lung-breathing vertebrata poisoned by the silver salts where there were no pulmonary lesions, we have always found immediately after death the lungs retracted and much less voluminous than usual. This results from contraction of the bronchial muscular fibres, coincident with that of the external respiratory muscles; which is considered by Cullen to be the immediate cause of asthma.

All the experiments prove that the vaso-motor system is the last to resist the toxic effects of this agent. By exclusion the troubles of respiration are explained by a toxic action upon the respiratory centres in the medulla itself, which governs not only the spinal nerves of the external respiratory muscles, but also the nerves of the bronchial muscles through the pneumogastrics. At a more advanced stage the centres of origin of the vaso-motor nerves of the lungs, confounded partly with those of the pneumogastric in the immediate neighborhood of these ganglia, are able, under the paralyzing influence of the toxic agent, to determine in the lung the phenomena of congestion and hypersecretion; resembling that seen in the liver and kidneys following mechanical irritation of the floor of the fourth ventricle. This hypothesis seems more in harmony with the observed facts than the one which attributes the pulmonary troubles to reflex action (Charcot and Ball).

In the inferior vertebrata, where a comparatively large dose acts more slowly than in the mammifera, and even in the mammifera if the dose be feeble, we are able to notice an increase in the excitability of the reflex centres. In the fish, batrachians, and saurians, one of the first evidences of the toxic effect is the substitution of violent convulsions for voluntary efforts. These convulsive movements persist, even augment in intensity, when voluntary motion is suspended; and, even after the

arrest of the circulation, external excitation, by shaking or even contact, produces reflex convulsions. When the respiration has ceased, mechanical excitation provokes the return of a few inspiratory movements with the convulsions. These experiments, whether by nitrate or hyposulphite of silver, show great analogy to the tetanus produced by strychnia-poisoning.

The assimilation of the therapeutic action of the nitrate of silver to that of strychnia, the property common to these two agents of setting in action the excitomotor power of the medulla, which Charcot had previously deduced from clinical observations, is therefore proved and corroborated by physiological experimentation.

The specific action upon the cardiac muscular fibre, causing sudden arrest of its action, which has been asserted by some observers, cannot be considered as sustained by these experiments. On the contrary, the action of the heart was in many cases the latest manifestation of life. Nor should we attach much more importance to the fact that the blood was tarry and coagulated badly in the dogs thus poisoned (M. Rabuteau), because this has been observed in all cases of sudden death from asphyxia. Cubic and prismatic needle-shaped crystals have also been found in the blood and white granulations, which were considered as chloride of silver, but which in reality are often found in normal blood after coagulation, and are the well-known crystals of hæmato-crystalline and of creatinin.

In seven experiments made on dogs and one cat, which presented all the symptoms of argyric intoxication after hypodermic injection of the hyposulphite of silver, the blood examined during the period of asphyxia, immediately after death, and the next day, showed neither crystals nor granulations of chloride of silver, but was normal; and only when it commenced to alter was there found, in one case only, the prismatic crystals of hæmato-crystalline. The blood of all the batrachians, saurians, fishes, birds, and the other mammifera examined under the above conditions has been found in every case perfectly normal, and presented no trace of granulations or crystals.

I do not deny, on the contrary I can only explain the special action of the silver on the nervous and muscular systems by admitting, that it circulates in the blood, mixed and combined with plasma, probably in the condition of an albuminate, thus being carried to the primitive elements of the tissues associated with the nutritive principles furnished them by the blood. Is the blood itself altered by that association, and has it lost any of its normal physiological properties? Nothing has shown it thus far, and the blood which carries in the organism a fatal dose of a compound of silver does not appear more altered than one which only contains a proportion of the toxic agent compatible with health and life and which produces only very slight or inappreciable effects. It seems that the blood plays the rôle of an agent of transport indifferent itself to the action of the toxic principle, at least in the methods of experimentation to which I have confined myself,—that is to say, when the salts of silver enter the blood by the way of absorption.

Conclusion.—Whatever may be the apparent variety of the phenomena which take place in the animals of different species, from the salts of silver introduced by *absorption* into the organism, these phenomena are always the direct consequence of the intoxication of the elements of the encephalo-rachidian nerve-centres, complicated in some cases by the intoxication of the muscular elements pertaining to animal life.

The blood which carries to the tissues the toxic substance, which it has received by the way of absorption, is not apparently altered either in its elementary composition or normal properties.

PHILADELPHIA MEDICAL TIMES.

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EDITORIAL.

DR. SHARPEY, of London, has recently had a narrow escape from death, caused by his taking inadvertently a solution of atropia for quinine. The symptoms developed themselves very curiously, as nothing was felt calculated to alarm Dr. Sharpey, who knew he had taken atropia, but thought the solution was a weak one, until about 1 P.M., some hours after the mistake, when he fell suddenly senseless to the floor, where he was found by a servant attracted by the heavy fall. Dr. Thane was summoned, and arrived at the house in a short time. He says, *inter alia*:

"I found the patient sitting on the floor, supported by two servants, making futile efforts to rise. He was unconscious, and speaking incoherently at intervals. The skin was hot and pungent, face flushed, veins of forehead turgid, and head burning. Pupils slightly dilated, conjunctiva not injected, breathing natural, pulse 110, irregular, generally full, but varying much at intervals; heart's action irregular, and apparently obstructed; teeth and lips dry, and covered with sordes.

"We immediately placed him on the bed, but had great difficulty in keeping him there, as he was extremely restless and wanted to get up. He had no paralysis, moving all his limbs freely and forcibly.

"He became more restless and delirious, talking constantly about his affairs apparently, and busy with his hands, pulling the bedclothes about. On asking him loudly if he had any pain in the head, he replied, 'No pain whatever.'

"It now became impossible to keep him in bed, and very difficult to prevent his walking about. He ex-

pressed a constant and frequent desire to pass water, but did not succeed in doing so. The bladder was found empty on percussing the abdomen."

For the further details of the case, as given by Dr. Sydney Ringer, we must refer our readers to the London *Lancet* of September 27, contenting ourselves with the statement that Dr. Sharpey was very delirious all night, but by 9 A.M. the next day had entirely recovered consciousness.

Speaking of his own sensations, Dr. Sharpey writes:

"I have no recollection of this fall, nor of what occurred for some time after, but I was speedily attended to by Dr. Thane of Montague Street and his son, and at a later hour also by yourself.

"The first thing I can recollect is, that I was struggling with people in the room, among whom, as I afterwards learnt, were Dr. Thane and yourself, also my nephew, Mr. George Goodall, whom I at once recognized when he told me who he was. I suppose I must have been very fractious in my delirium. I imagined I had to go off by a railway-train which started at ten in the morning, and that the hour was approaching, whilst I had nothing ready for the journey; and I believe that I wished to dress, and to pack my things, but was thwarted and prevented by the people about me. At length I was persuaded that it was too late to catch the train, and agreed to wait till the evening. I may here explain that I had come from Scotland by rail on the previous Thursday. I then became sensible that I was lifted into bed, and ordered on no account to rise, which I thought a most unreasonable restraint, especially as I was tormented with irritation in the bladder, and almost incessant desire to pass urine, which was in very small quantity. In this way I passed a very restless night, but slept fairly in the morning. Meanwhile my head began to clear; I remembered having taken atropia, and then was able to attend to my condition with some degree of intelligence. I had an intense feeling of dryness in my throat, which I knew to be an effect of the poison; this abated towards morning; then, although I could move my body and limbs, it was only by a great effort, and when I raised my arms they felt as if made of lead. This I ascribed to partial paralysis of the motor nerves, and I watched with some interest the return of power as the night advanced. As to my sensations, they were not blunted, but I misinterpreted them. Thus, I felt a wet cloth on my head, but supposed I had been out in the rain without my hat; and a dose of bromide of potassium given to me I recognized as a saline solution, but imagined it was mineral water from the Airthry spring, which I had tasted on the spot some ten days before."

AMHERST COLLEGE has given its LL.D. to Dr. Nathan Allen, famous for his researches in vital statistics.

RESPECTABLE physicians in this city have recently received through the mails a small pamphlet of sixteen pages devoted to the subject of medical electricity, and especially to its marvellous curative effects in diseases of all kinds as used by the utterer of the pamphlet and Madame his wife. Along with the usual clap-trap of free consultation, pictures of men with lumps ("fungus hæmatodes!") in the sternal region as large as their heads, and the same after three weeks' treatment with scarcely the trace of a scar, lists of references, certificates from persons who have been speedily cured of incurable disorders,—*en passant*, there is a suggestive resemblance between the literary style of the author and that of the writers of these letters,—along with these insignia of quackery is a proposal to practitioners of medicine offering ten per cent. of the fees obtained from victims sent to the author for electrical treatment. We have seen rampant quackery, we are accustomed to the barefacedness of charlatanism, but this offering of a sop to Cerberus seems to us the sublimest height of impudence ever scaled by genius! Who'll be the gudgeon to take the bait?

PROCEEDINGS OF SOCIETIES.

PATHOLOGICAL SOCIETY OF PHILADELPHIA.

THURSDAY EVENING, SEPTEMBER 25, 1873.

THE PRESIDENT, DR. J. H. HUTCHINSON, in the chair.

DR. J. M. BARTON presented a pair of *fatty kidneys* from Mrs. C., æt. 49 years. She had been a healthy woman until she began to lose strength, about eight months ago. When the doctor first saw her, in the early part of September, both limbs were œdematous and greatly enlarged, which had been their condition for the previous four weeks; the right one was particularly large, and also the seat of an attack of erysipelas,—the immediate occasion of her requiring medical services. The urine was high-colored and scanty, and contained a large amount of albumen. On microscopic examination many free fat-globules and some hyaline casts were found. No fatty casts were discovered, though carefully sought. At first the patient improved, the erysipelas disappeared, the œdema diminished, the urine became increased in quantity and less high-colored; but on the 17th uræmic coma appeared, the case terminating fatally in forty-eight hours, during which scarcely any urine was secreted.

Autopsy.—Drs. S. D. Gross and Porter present. A few ounces of fluid were found in both the peritoneal and pleural cavities, particularly the left pleural. The kidneys were enlarged and quite white externally. On section a considerable quantity of fluid blood appeared at the most dependent portion. The capsule was readily separated; lungs and spleen healthy; liver cirrhotic; heart small, pale, and flabby, but with no evidence of valvular disease.

Dr. WILLIAM PEPPER presented a *heart showing*

marked hypertrophy with dilatation, and also disease of the aortic valves, two of which were apparently fused into one, owing to a separation along the entire line where one of each of their ends was inserted into the aortic wall. The leaflet thus formed was reverted, so that free regurgitation took place.

Dr. PEPPER also presented a *specimen of aneurism of the aorta dissecting into the walls of the right ventricle*, removed from a man who was admitted to the Philadelphia Hospital in the morning and died on the evening of the same day. The heart was also enormously enlarged, weighing thirty-five ounces. The pericardium was tightly adherent throughout. A tumor was found projecting itself into the right ventricle, forcing its way through the muscular structure of the heart, a part of the wall of the sac being covered by the lining membrane of the heart. On cutting into it, he found it to be an aneurism about four inches in diameter, partly filled with dark clotted blood and partly with decolorized laminæ of fibres. It communicated with the aorta just above the valves by a mouth an inch and a half in diameter. This aneurism of the aorta, arising behind one of the valves and enclosed in the pericardium, had attained such a size as to cause absorption of the muscular wall of the heart, or to force itself between the muscular trabeculae, and finally to project itself as a round mass into the cavity of the ventricle. Death had occurred from rupture of this aneurism into the pulmonary artery, immediately above one of its leaflets, by an opening one-half inch in diameter. The left side of the heart is moderately enlarged, the walls are thickened, and the cavity dilated. The aortic valves are healthy.

Dr. ALISON presented, for Dr. J. C. WILSON, a *pair of contracted kidneys*. The specimens were removed from the body of a gentleman aged 76 years, who had during many months exhibited signs of impaired health, but refused to call medical aid until a short time prior to his death. When first seen, July 8, 1873, he presented symptoms of advanced renal disease, complete loss of appetite, vomiting on taking food, occasional puffiness of face and eyelids, and œdema of hands and feet, most marked in the left side, but at no time very great. The urine averaged from two to three pints daily, was light-colored and limpid. Owing to the fact that the quantity sent for examination was always small, its specific gravity was not ascertained; and, for the same reason, it may be, no casts of any kind were discernible in the slight flocculent sediment that it deposited on standing. On testing it for albumen, coagula were formed which varied in amount from one-half to one-third part of the total bulk of urine examined. The liver-dulness was slightly decreased; the heart-sounds were distant and feeble; there was no murmur.

August 23, the patient had a severe and prolonged epileptiform convulsion, and from that date until his death, on September 15, he showed a varying degree of mental dulness, and had occasionally slight convulsive seizures. It is interesting to note that there was no lividity of the skin or lips, except during the convulsions, although he was evidently suffering from uræmia.

At the autopsy the heart was found to be enlarged (dilated hypertrophy) and fatty. Its muscular structure exhibited upon microscopic inspection granular and fatty deposit, obliterating in many places the transverse striæ. There were atheromatous deposits at the bases of the aortic valves and in the aortic arch.

The liver was smaller than usual, but normal in appearance.

The kidneys were small, the contraction being most marked in their long diameter; the surface coarsely granular and studded with minute cysts, the capsule everywhere so tightly adherent that it was impossible to separate it from the kidney-substance, the cortex atrophied, the pelvis and calyces filled with fatty tissue.

The tissues of the body were everywhere loaded with fat. This gentleman was a good liver.

Dr. W. G. PORTER exhibited a *necrosed astragalus* removed from O. H., aged 22, laborer, a native of Wales, temperate in habits. He was admitted to the Presbyterian Hospital July 21, 1873. He was unable to speak a word of English, but the men who brought him stated that his foot had been injured by the caving in of a bank of earth. After careful examination by Drs. Allis and Hodge, a diagnosis of luxation of the astragalus inwards was arrived at. An unsuccessful attempt at reduction was made: this was within half an hour of the reception of the injury. The man was kept quiet in bed, and evaporating lotions were applied, until all inflammatory symptoms had subsided.

July 31st, he came under Dr. Porter's care. All pain and inflammation had disappeared. The dislocated astragalus could be distinctly felt beneath the skin, close behind the inner malleolus. He was kept in bed till the 17th of August, when he was allowed to rise and encouraged slowly and carefully to use the foot, first with crutches and then with a cane. On the 28th of August he was suddenly seized with a chill, followed by violent constitutional irritation. Sloughing of the integuments over the bone rapidly followed, and in a few days a considerable portion of the bone was exposed. The pulse was considerably excited, and the temperature varied from 102° to 104° for several days. The amount of suppuration was not very great, and on the 25th of September Dr. Porter removed the loose bone, by forceps alone, and without enlarging the wound; a portion of the bone, being soft, was crushed by the forceps during the removal, but the fragments were removed without difficulty.

Dr. J. H. CATHCART presented a pair of *cystic kidneys* from Mrs. G., æt. 45 years, married. She has been suffering from trouble with the lungs for the last eleven years; had typhoid fever eight years ago. Complained of pain in the left side, and at times in the back, resembling somewhat uterine pains. They yielded to small doses of anodyne, and the doctor thought they might be caused by flatulence. Only once was his attention called particularly to the urinary organs; and that was from the expulsion of a stone from the bladder. She then had not suffered any exacerbation of pain in the side or back. He asked her to save some of the urine, but she failed to do so, after repeated requests. It was not, therefore, examined.

The cysts in the kidneys were lined with inorganic matter of undetermined composition, but there was no calculus in the kidney or its pelvis.

Dr. JAMES TYSON thought the question might be raised as to whether these cysts were not the result of degeneration and breaking down of a cheesy deposit, or matter similar to that contained in the lungs; but he thought the view which ascribed them to an impacted calculus, even though none was found in the kidney post mortem, was the most reasonable one.

The PRESIDENT inquired the size of the calculus which had been passed.

Dr. J. S. PARRY said he first saw the patient in consultation with Dr. Cathcart about a year ago. She was then suffering with phthisis. He did not see the calculus, but, after a good deal of trouble in investigation, he concluded it must be as large as a filbert. Its expulsion was followed by a gush of urine, and great relief to the patient's symptoms.

The specimen was referred to the Committee on Morbid Growths, who reported as follows:

"Your committee have examined the kidney presented at the last meeting by Dr. Cathcart. The infiltrated zones of the ulcerated irregular patches in the cortical substance were carefully searched for any evidence of tubercle. Nothing having been found be-

yond the indurative thickening of all the connective tissue in the immediate vicinity of the ulcerations, your committee beg leave to report that they do not regard this as a case of 'phthisis renalis,' but as one of local sclerosis and destruction, such as would naturally ensue from the presence of a foreign body."

GLEANINGS FROM OUR EXCHANGES.

ASPIRATION OF URINE (*The Clinic*, August 30, 1873).

—Dr. James T. Whittaker reports the case of a young man, æt. 18, who, in the midst of a nightmare, leaped out of his window and fell forty feet upon a brick pavement. He was seen the next morning, when he was in apparent collapse, cold and pulseless, the abdomen distended to its utmost, and the face anxious. There were a Barton's fracture of the left wrist, a compound comminuted fracture of the same elbow, fracture of the horizontal ramus of the pubes, and terrible contusion of the left hip. A catheter was introduced with the greatest difficulty to the neck of the bladder, when four ounces of dark, grumous blood escaped, and afterwards a small quantity of urine. All subsequent attempts at catheterization proved futile. The membranous portion of the urethra could not be passed at any time, and it was believed that it was torn across at or near the neck of the bladder, and that the vesical orifice was closed by coagula. The catheter could be felt by the finger in the rectum to leave the urethra and glide along between the rectum and the bladder.

As the bladder was greatly distended, it was decided to use Dieulafoy's aspirator; and, accordingly, the urine was drawn off through a puncture made in the median line just above the pubes, the method being now so well known as to render description needless. The operation was repeated every morning for eight days, at which time a few drops of urine began to pass *per urethram*, and in two days more he could pass his urine as well as ever, and all abdominal symptoms subsided. He has now every prospect of a complete recovery. No precautions whatever were taken in making the punctures, and when the bladder was emptied the trocar was withdrawn in the same manner as the hypodermic syringe, without even making pressure upon the orifice.

Dr. Whittaker believes that capillary hypogastric puncture is a perfectly harmless operation; that in all cases it should be substituted for ordinary hypogastric puncture; that in a great number of cases it may, when only once practised, allow the surgeon to penetrate afterwards into the bladder through the natural passages; that in certain cases where catheterism is impossible it may be performed three or four times a day without any injurious effect, and thus permit the surgeon to gain time and restore the natural passages; and that, at the very least, it constitutes a palliative means of the highest importance. Quoting Dr. Little, the following rules are suggested for the operation:

"1. The patient should lie on his back, and, if the bladder is not much distended, the operation will be facilitated by slightly elevating the patient's hips by means of a pillow placed beneath them.

"2. The puncture should be made on or near the median line, from one inch to one inch and a half above the pubes, and should be made each time in a different place. In the case described, the punctures were about a line apart and extended over an area about half an inch in diameter. Mr. Watelet recommends the No. 2 capillary trocar; but in cases where cystitis exists and the urine is loaded with pus, mucus, or the phosphates, one of the larger trocars may be used with safety.

"3. The bladder may, when necessary, be washed out by filling the cylinder with water from the basin, and reversing the action of the instrument, without withdrawing the trocar from the bladder."

MEAT-TEA.—Bogoslowsky (*Arch. f. Anat. u. Physiol.*, 1872, 347, 428, and *Centralblatt*, 1873, p. 279) has re-examined the theories of Kemmerich in regard to the action of meat-tea, which was supposed by him to depend wholly on the potash salts contained therein. Bogoslowsky says that Kemmerich used too large doses, and that the fact that a rabbit can be killed not only by a large amount of beef-tea, but by the salts extracted from a similar amount, proves nothing except that both are (in enormous doses) poisonous.

With small doses the difference is a marked one. While, for example, a rabbit was killed by the injection of extract of 700 grammes (1 pound 10½ ounces) of meat reduced to 30 cubic centimetres (about 1 ounce), the ashes of the same quantity dissolved in 30 cubic centimetres of water produced in another rabbit only a transient acceleration of the pulse, and the animal completely recovered. Nine days after, it died in an hour and a half after the ingestion of the corresponding quantity of meat-tea.

It was shown that injections of warm water cause an increased rapidity of the pulse, but of meat-tea, a much greater and more lasting acceleration. The salts hardly differ from warm water, or, in larger doses, the acceleration may last somewhat longer.

The author was able to produce these phenomena to a slight degree in his own person, but in another individual did not succeed. After larger doses (10, 20, 30 grammes), in the latter case, the pulse fell, while the thermometer was unchanged. After 40 grammes gastric symptoms appeared, and the pulse rose. He concludes, as a practical result, that extract of meat is not so innocent a dietetic substance as is generally supposed, but always calls for care in its administration. (If Liebig's or any similar extract is here referred to, it would seem that the danger is not great unless the quantity used considerably exceeds that mentioned in the directions accompanying the packages.)

In endeavoring to determine to what ingredient meat-tea owed the excess of its action over that obtained from the salts, Bogoslowsky found that creatinin, which exists in extract of beef in considerable quantities, when injected either into the jugular vein, under the skin, or into the stomach, produced a slight acceleration of the heart's beat, but he could not get any fatal effect.

From all which it appears that the stimulant action of ordinary doses of beef-tea is due partly to the warm water, the salts, and the creatinin. It would seem, however, from the observations last quoted, that the presence of creatinin is not sufficient to account for the difference between the action in beef-tea and the salts obtained therefrom. It is only in exceedingly large doses that the salts alone are sufficient to account for a fatal effect by their depressing action upon the heart.

Leube (*Berliner Klin. Wochenschrift*, 1873, Nos. 17 and 19, and *Centralblatt*, 1873, p. 491) has made use of the following method of preparing a solution of meat, to replace the complicated and costly process of Meissner with natural pepsin, which is, besides, objectionable on account of the disagreeable taste and smell of the product. 1000 grammes of lean beef is placed in a porcelain pot, with 1000 cubic centimetres of water and 20 cubic centimetres of pure hydrochloric acid. The mixture is heated in a Papin's digester for ten or fifteen hours, and occasionally stirred. The mass is then rubbed down in a mortar to the consistence of an emulsion, and boiled fifteen or twenty hours more without the cover of the digester being lifted. It is then neutralized with carbonate of soda, evaporated to the

consistence of a pap, divided into four portions, and dispensed in pots.

The muscular fibres are broken up to a fine detritus, and the greater part of the albuminoid constituents is dissolved. The preparation is well borne and willingly taken, but it is better to use some other easily digestible food therewith,—in order not to disgust by too constant use. The taste may be improved by the addition of Liebig's extract.

The solutio carnis has been used in acute gastric ulcer and in chronic dyspepsia. It is supposed to give rest to the stomach by sparing it the labor of digestion, the albuminoids being already converted into peptones. —*Boston Medical and Surgical Journal*.

ESMARCH ON THE PREVENTION OF HEMORRHAGE DURING OPERATIONS.—In the *Berliner Klin. Wochenschrift*, No. 32, 1873, is reported Professor Esmarch's method of preventing hemorrhage during operations. At the second congress of German surgeons, he made an important communication, "Ueber Blutersparung bei Operationen an den Extremitäten." In a few words, the plan consists in emptying as much as possible the blood from the extremity to be operated on before commencing the operation, and then, during the operation, preventing, by powerful compression, any blood from gaining access to the limb.

For instance, when a sequestrum is to be removed from the tibia, an elastic or other bandage is to be applied from the tip of the toes to the middle of the thigh whilst the patient is being chloroformed. This must be applied tightly enough to drive the greater part of the blood in the capillaries and veins towards the heart. Above the bandage an india-rubber tube, about as thick as the thumb, is then stretched tightly around the thigh, so as completely to arrest the circulation. If the subject be muscular, a pad is placed over the course of the chief artery.

The bandage may now be removed, and the operation commenced. The skin of the limb is quite pale, and no pulse to be felt anywhere in it. With the first incisions, a little dark blood may come away from the deep veins, but this speedily ceases, and the operation may be completed *wie an der Leiche*; no more blood flows than from a corpse, and the operator is not embarrassed by the blood welling up in the wound, nor by the assistant's sponges. Those accustomed to the often profuse bleeding during operations for necrosis will hail this innovation with delight. The hemorrhage is sometimes dangerously profuse, while it is difficult to control, and renders the operation more difficult. Dr. Esmarch observes that the sensation he experienced when he first employed this method was one of lively regret that so simple and efficient an expedient had not been before resorted to.

The reporter has tried this method himself in a case of necrosis of the tibia; and he is able to state that during the entire operation, lasting nearly a quarter of an hour, not one single drop of blood flowed, and the wound remained perfectly dry throughout. Every portion of the wound remained unobscured by either the oozing of blood or the sponges of the assistants. The facilities thus afforded to the operator were very great, whilst the patient, a very delicate weak child, was surely better for being saved all loss of blood. No unpleasant effects attended the use of the elastic apparatus. His colleague, Mr. Arnot, has since tried it in an excision of the knee-joint. Not a drop of blood flowed during the half-hour the operation lasted. This plan will no doubt be extensively resorted to.—*William MacCormac, in London Medical Record*.

MENSTRUAL JAUNDICE.—The close relation existing between disturbances of the female sexual organs and

affections of the liver is well known, to which is perhaps due the relative frequency of hepatic disease in females. Senator has recently contributed an article in which he draws attention to the hitherto apparently unobserved coexistence of menstrual disturbances and jaundice. Four cases are recorded, in all of which, up to five repetitions, before or during the menstrual period, with slight or no loss of blood, jaundice appeared, continuing several days, and accompanied by corresponding constitutional disturbance and gastric derangement. With the appearance of a more copious flow the symptoms disappeared, leaving the patient well up to the next menstrual period. It was evident that the cause was biliary obstruction, from the simultaneous enlargement of the liver, the clay-colored stools, and the presence of biliary salts in the urine, which were detected in one case. One of the patients complained of hemorrhoids for the first time during this period. Another of the cases was interesting in having been affected three times during the first months of a pregnancy, one and a half year before the occurrence of the attacks of menstrual jaundice, with jaundice benign in character, which is remarkable, as jaundice is usually malignant when occurring in connection with pregnancy.

Senator accounts for this condition by a hyperæmia of the liver, which can easily cause swelling of the mucous membrane of the biliary passages, and their consequent occlusion. It is well known that obstructed menstruation is frequently accompanied by hyperæmia of the liver, as also of other organs, as the thyroid body, and that vicarious menstruation from the stomach, lungs, nose, etc., takes place.

Though the disturbances occasioned by menstrual jaundice may be slight and transitory, remedial interference is nevertheless recommended, to prevent the possibility of the accession of some severer form of hepatic disease. In the above cases the use of the warm bath, with the internal use of Carlsbad salts, with moderate diet, was found beneficial.—*New York Medical Journal*.—*Centralblatt*, 1873, No. 14.

TREATMENT OF THORACIC ANEURISM BY ELECTRO-PUNCTURE.—The patient with thoracic aneurism, whom Mr. Beck has been treating by means of electro-puncture, died on Tuesday night. He was suffering from a large and rapidly growing aneurism of the descending aorta, which not only caused bulging of the lower ribs on the left side, but had eroded several of them, and gave rise to a pulsating tumor just below the angle of the scapula. Mr. Beck first operated on the 2d instant; he inserted the wires into the most prominent part of this tumor, and passed the current between them for about an hour and a quarter. The effect, as we stated in the *Journal* of the 6th instant, was very encouraging; the tumor became decidedly firmer, the impulse less heaving, and the pain was greatly diminished; there was no irritation about the seat of puncture. This improvement lasted five or six days, when the impulse became stronger, and the tumor began again to enlarge. On the 10th Mr. Beck repeated the operation; but this time the improvement was but slight, and of a still more fugitive character. A few days afterwards, it was found that some inflammation had been set up round one of the punctures; and, on pressure, a small quantity of pus escaped. The aneurism, though it never became absolutely diffused, now spread rapidly under the skin of the back, and it was found that the dullness was extending upwards over the left side of the chest; that the heart was being pushed more and more to the right, and the lung becoming compressed. The aneurism, as the necropsy showed, had burst into the left pleura. The patient gradually sank, and died of exhaustion. Before death, the skin round the inflamed

puncture had become quite dark and gangrenous. The lesson from this case is, that treatment by electricity must be commenced at an early period of the disease, in order to give any prospect of success. That it does induce extensive coagulation in the sac, seems evident; and it is very desirable that any method which gives reasonable hopes of curing what has hitherto been a necessarily fatal disease should be thoroughly tried before being condemned.—*British Medical Journal*.

THE USE OF ERGOT.—Dr. T. K. Spendee writes (*British Medical Journal*) as follows: "I have given ergot in some cases of neuralgia, according to the advice of Dr. Woakes, of Luton; but, though I have had particularly good results, I have not been able to remove pain entirely by the use of ergot alone. I can endorse all the favorable views of ergot in the treatment of hæmoptysis, as related by Dr. Dobell and Dr. Anstie. I have used the medicine for this purpose during several years past, having been originally led to do so by a consideration of its therapeutic analogies. It does not yet seem to be clearly defined whether there is any stage of phthisis, even the most advanced, which is absolutely beyond the control of ergot, when spitting of blood occurs. Of the exceeding value of the medicine in these cases (though it now and then unaccountably fails), there can be no doubt whatever; and, as the facts are very little known, attention cannot be too often called to them. The action of ergot on the uterus is a proverb: why should it not affect in a similar way a neighboring organ,—the bladder? I have found that that quasi-paralytic condition of the bladder, which may come on in middle-aged persons from over-fatigue or from simple want of power in the coats of the organ, is greatly relieved by the continuous use of ergot, and may be altogether removed. The so-called hysterical paralysis of the bladder in young women is admirably treated with the same medicine (though I cannot deny the occasional necessity for the use of the catheter). Whether this want of power be simply motor weakness, or secondary to some variety of abdominal neuralgia, there is no more splendid combination of medicines than ergot and strychnia (half a drachm of the fluid extract of ergot and five or six minims of the *liquor strychniæ*, Ph. B., in chloroform-water, three times a day); and these doses should be continued perseveringly for several weeks, as a very rapid benefit cannot be expected.

TRAUMATIC DESTRUCTION OF ONE CEREBRAL HEMISPHERE WITHOUT FUNCTIONAL DISTURBANCE.—The eminent Italian surgeon Porta brought before the Institute of Lombardy, on the 19th of December, 1872, the case of a man who, in consequence of a severe injury, lost the whole of the right hemisphere of the brain. The unconsciousness lasted a few hours, but when the patient recovered his senses he recollected being picked up and taken upon a cart to the hospital. He stayed two months and a half in the institution, the skull exfoliated, and the wound became fungous, when he claimed his discharge, though affected with paralysis on the left side, which had occurred immediately after the infliction of the injury. He subsequently applied at the clinical wards of Pavia, where Dr. Porta had an opportunity of studying the case. Eighteen months had elapsed since the accident, and twelve months since the closure of the wound. The author minutely describes the integrity of the intellectual functions, the amount of paralysis in the upper and lower limbs, and concludes by dwelling on the three following points: 1. That the encephalon is a double organ, composed of two equal parts, and that, one being destroyed, the other survives without functional disturbance. 2. That in the different spheres of the cerebral, medullary, and nervous system, special and diverse functions are perfectly isolated and localized, the disturbance of the

functions following localized injuries. 3. That, in the present case, electricity diminished the paralysis of the arm, and that the improvement would have been more marked had the treatment been sufficiently prolonged.

The case is confirmatory of the well-known experiments on the lower animals, from whom a whole hemisphere was removed.—*London Lancet*, Sept. 6, 1873.

THE DELIVERY OF THE PLACENTA BY SUPRA-PUBIC PRESSURE.—Judging from our own experience, and from the number of laudatory papers on this subject, Credé's method of delivering the placenta, or some slight modification of it, bids fair to take the place of every other. The plan which we adopt is as follows. At the maximum of the first uterine contraction after birth of the child, the fundus of the womb is grasped through the abdominal wall, between the thumb in front and the fingers behind. It is then to be both forcibly squeezed and at the same time pressed downward and backward. By means of this uterine expression the placenta and membranes are usually at once detached and extruded. Sometimes, indeed, they will suddenly pop out of the vulva, just as the stone escapes when a cherry is compressed between the finger and thumb. Occasionally it will require two or more pains to effect this; but the sooner this plan is resorted to after the birth of the child, the more easy in execution will it be. Those who, like ourselves, practise this method, contend that it offers many advantages over any other. The risk of communicating any puerperal disease is lessened. The expulsion of the placenta and membranes by a *vis a tergo* is more likely to be complete than by traction on the cord, which cannot be broken, as no traction is made on it. Adherent placenta is less frequently met with. The introduction of the hand into the womb is avoided, and so also, as a consequence, is the ingress of air. Finally, the tonic and energetic contraction of the womb, following this manœuvre, prevents the occurrence of hemorrhage or of unruly after-pains.—*Goodell, in Transactions Med. Soc. Penn.*, June, 1873.

POISONING BY WILD PARSNIP [*Sium latifolium* OF GRAY] (by C. B. White, M.D., U.S.A.).—On April 24, 1873, I was called, after dark, to assist E. C., a native of Belgium, aged 49 years, nearly twenty-one years a resident of California, who was suffering from the effects of eating less than one ounce (estimated) of the fresh root of the wild parsnip.

On my arrival, I found that he had received partial relief from vomiting and purging, apparently induced by the root itself, but I found him much excited and very prostrate in strength; pulse 44, skin cold and clammy, pupils somewhat dilated, respiration slow. He complained of great dizziness, lack of mental power, and loss of voluntary motion, headache, sense of fear of death, with a decided burning feeling along the alimentary tract (œsophagus especially), and sense of swelling and flatulence about the bowels. I examined the excreta and became satisfied that most of the root had been ejected, and at once gave him two ounces of whisky, mixed up with a raw egg. After this had revived him, I administered morphine sulphas, gr. one-fourth, and left a compound ipecac powder for later use.

Before I left him he was feeling much better in every way, the skin was warmer, the pulse 50, the respiration and the appearance of the eyes nearly normal.

PRECOCIOUS MENSTRUATION.—Dr. R. K. Clark details (*Western Lancet*, Sept. 5) the case of a girl who, soon after completing her fifth year, complained to her mother of pelvic pain and the usual symptoms of approaching menstruation. She soon had a sanguineous show, which continued for three days and then ceased,

but has appeared regularly once in twenty-eight days ever since. She is not precocious in any other respect, not large of her age; but the usual change in form suited to a young lady fifteen or sixteen years of age has taken place, so that she looks like a little woman. An aunt of this child is said to have menstruated at six years of age and continued till she was thirty-eight.

MISCELLANY.

CULTURE OF THE OLIVE IN AUSTRALIA.—The plant is correctly stated as being easily propagated, and from its hardy, drought-resisting nature, the ease with which it can be grown, and the small amount of skill and labor required in its cultivation and in the manufacture of its products, it seems specially adapted to the circumstances of the colony as well as to its soil and climate. As a shelter-plant to break the strong winds, and for planting around dwellings in the country and giving to them that air of snugness so often painfully lacking in the appearance of bush-houses, few plants equal and none excel the olive. The habit of growth is sturdy and compact, the form and color pleasing to the eye, and, in addition to these desirable qualities, the fruit is profitable, so that in this ancient friend of man the useful and ornamental are combined. Taking these facts into consideration, there seems no reason why the roadsides of civilized Australia should not be lined with olive-trees, but, on the contrary, there is every reason why they should, as in the fulness of time no doubt they will be.

With the increase of machinery the demand for oil increases, and in fact the market for it is practically unlimited. In South Australia, from the fruit of trees twenty years old an annual yield of ten gallons of oil per tree has been obtained, which, at 6s. per gallon, gives £3 per tree as the value of the produce. True, the olive cannot be regarded as a source of immediate profit. It requires time before it will bear fruit. Some planted eleven years ago in West Australia are now coming into bearing. On the other hand, the olive-tree is of a very enduring character, and with age increases in value. These characteristics have given rise to the Italian adage, "He who wants to leave a lasting inheritance to his children should plant olives."—*John R. Jackson, A.L.S., in Food Journal*.

THE salt-mines discovered in the Teche country, Louisiana, during the late war, are now being worked, while the surface is covered with growing sugar-cane. The bed, estimated to contain ninety million tons of pure solid rock-salt, is located on an island of 300,000 acres, rising 185 feet above a salt marsh. Access is obtained to this island by a steamboat-line running between Brashear City and New Iberia. The soil is composed of sand, loam, gravel, and clay, and the surface is partially covered with magnolia, live-oak, cypress, maple, locust, gum, walnut, and fruit-bearing trees. The vegetation resembles that of a rich prairie, and the scenery is varied and beautiful. Access to the interior of the salt-mines is obtained by an elevator, running up and

down a forty-foot shaft cut through the solid material. The width of the vein is 120 feet, and the visitor is surrounded on all sides by rock-salt as dry as powder. The absence of moisture is one of the most striking peculiarities, and the iron and steel implements used are quite bright. Two large chambers have been cut out of the vein.—*North American*.

A USEFUL SOAP.—The following is commended, by those who have tried it, for scrubbing and cleansing painted floors, washing dishes, and other household purposes: Take two pounds of white olive soap and shave it in thin slices; add two ounces of borax and two quarts of cold water; stir all together in a stone or earthen jar, and let it set upon the back of the stove until the mass is dissolved. A very little heat is required, as the liquid need not simmer. When thoroughly mixed and cooled, it becomes of the consistence of a thick jelly, and a piece the size of a cubic inch will make a lather for a gallon of water.—*Boston Journal of Chemistry*.

RYE COFFEE IN EUROPE.—A Strasburger named Beckmann Oloffen has prepared a substitute for coffee by taking pulverized and roasted rye malt, mixing with it one-twentieth its weight of barley malt and some caramel, and exposing it to the vapor from roasting genuine coffee. In this manner part of the aroma always lost in roasting coffee is made use of to flavor the rye coffee. If we accept the conclusions of Aubert, that no caffeine is lost in roasting, the rye coffee has none of the poisonous properties of this alkaloid, and is preferable to the genuine. The discovery is said to have been already patented in England.—*Druggists' Circular*.

TO KEEP GUM ARABIC FROM MOULDING.—Solutions of gum arabic soon mould and sour, and finally lose their adhesive property. It is said that sulphate of quinine will prevent this, while it imparts no bad odor of its own. The addition of a solution of a few crystals of this salt to gum arabic will prevent the formation of mould quite as effectually as carbolic acid, and by analogy it is safe to suppose that the same salt could be used in writing-ink, mucilage, and possibly glue.—*Druggists' Circular*.

MODE OF ADMINISTERING CREASOTE.—As creasote is now frequently employed in the treatment of typhoid fever, and is exceedingly distasteful to some patients, it may be worth while to mention here a formula which in a great measure covers its flavor, and is easily prepared: Creasote, 3 drops; essence of lemon, 2 drops; orange-flower water, 1 ounce; spring-water, 3 ounces. A spoonful to be taken at frequent intervals throughout the day.—*Canada Medical Journal*.—*Virginia Clinical Record*.

THE great fire at Chicago in the autumn of 1871 has produced a large number of lunatics, no fewer than 250 sufferers from it having been adjudged insane by the courts of Illinois.]

THE consumption of horse-flesh is rapidly increasing in France. During the first half of the year 1867, 893 horses or mules were slain for consumption, and afforded 320,000 pounds of meat; during the corresponding period of the present year, 5186 animals have been slaughtered, affording about 1,800,000 pounds of meat for public consumption. This is an enormous increase, and the utilization of horses unfit for work, but thoroughly healthy, and not worth more than about £4, will, it is reckoned, increase the public wealth by 400,000,000 of francs.—*London Lancet*.

FOR CHAFING OF INFANTS.—Take of powdered starch two parts, white oxide of zinc one part. Make a fine, well-mixed powder. Dust the abraded places with the powder, after proper cleansing.

THERE are several members of the profession in California who own vast tracts of land. Dr. Glenn, of Colusa County, possesses a ranch containing nearly 45,000 acres. It has a frontage of eighteen miles on the Sacramento River, and is enclosed and divided by one hundred and forty miles of fencing.

THE Bengal government (so telegraphs the *Times* correspondent) has ordered the extension of the medical vernacular colleges in Calcutta, Dacca, and Patna.

ON the 8th ult. Professor Hughes Bennett, of Edinburgh, was elected corresponding member of the National Academy of Medicine of France.

PROFESSOR CZERMAK, the celebrated physiologist, whose work on the laryngoscope was translated by the Sydenham Society, died on Monday, September 15, at Leipsic.

M. CLAUDE COLLAS finds in the application of sinapised paper a cure for the bites of gnats.

OFFICIAL LIST

OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U.S. ARMY, FROM OCTOBER 7, 1873, TO OCTOBER 13, 1873, INCLUSIVE.

McKEE, J. C., SURGEON.—Relieved from duty in Department of the East, and to report in person to the Commanding General, Department of California, for assignment. S. O. 197, A. G. O., October 6, 1873.

ALDEN, C. H., SURGEON.—Relieved from duty in the Department of the Lakes, and to report in person to the Commanding Officer, Department of the Columbia, for assignment. S. O. 197, c. s., A. G. O.

WEBSTER, WARREN, SURGEON.—Relieved from duty in the Department of the East, and to report in person to the Commanding General, Department of California, for assignment to duty. S. O. 197, c. s., A. G. O.

McCLELLAN, ELY, ASSISTANT-SURGEON.—Assigned to duty at Headquarters Department of the South. S. O. 174, Department of the South, October 8, 1873.

HUBBARD, VAN BUREN, ASSISTANT-SURGEON.—Relieved from further duty at these Headquarters, and to join his station at Mississippi City, Mississippi. S. O. 158, Department of the Gulf, October 4, 1873.

BREWER, JOHN W., ASSISTANT-SURGEON.—Granted leave of absence for thirty days. S. O. 195, Department of the East, October 7, 1873.

DE WITT, CALVIN, ASSISTANT-SURGEON.—Relieved from duty in Department of California, to proceed to Harrisburg, Pennsylvania, and report by letter, upon arrival, to the Surgeon-General. S. O. 197, c. s., A. G. O.

GIRARD, A. C., ASSISTANT-SURGEON.—Assigned to duty at McPherson Barracks, Atlanta, Georgia. S. O. 174, c. s., A. G. O.

SATURDAY, OCTOBER 25, 1873.

ORIGINAL LECTURES.

CLINICAL LECTURE

ON A CASE OF RUPTURE OF THE AORTIC VALVES.

BY WILLIAM PEPPER, M.D.,

Lecturer on Clinical Medicine at the University of Pennsylvania.

GENTLEMEN:—I avail myself of the opportunity afforded me by the post-mortem examination of a case which has been under my care for the past four or five years, to speak to you of a very rare accident,—the rupture or separation of one of the valves of the aorta from a mechanical cause. These valves, more than any other part of the circulatory apparatus, are exposed to violence and overstrain. Thus, in all classes of laborers whose work involves a great amount of muscular exertion with the arms, a disproportionately large number of cases of aortic disease will be found. And the mode in which this result is brought about is readily explained. In persons so employed we find the heart, stimulated by the active exertions, contracting frequently and with great force; the aorta is of course correspondingly distended, and the pressure exerted to force forward the blood is extremely great. Under these circumstances it is evident that if anything occur to prevent the free onward movement of the blood through the vessels, the arterial tension must be greatly increased, and the recoil upon the valves of the aorta which close to prevent reflux into the left ventricle proportionately powerful. Now, the peculiarity of violent muscular exertions with the arms is that they tend to produce precisely such obstruction. Immediately before the effort, whether at striking or lifting heavy weights, a deep inspiration is taken, which aids in filling the cavities of the heart to their utmost, and then, in order to afford fixed points for the contraction of the muscles of the arms and shoulders and back, the chest is held rigidly fixed. The violent contractions of the muscles of the neck which follow compress the carotid arteries, while those of the muscles connected with the arms impede the free flow of blood through the subclavians and their branches. Thus, while the tension within the chest is greatly increased, and the heart is stimulated to violent contraction, there is also an enormous elevation of arterial tension. The strain which results must expend itself *directly* upon the walls of the left ventricle, which must over-exert themselves to press forward the blood; and *indirectly* upon the aortic valves, which are compelled to bear the shock of a recoil of the blood-stream violent in proportion. When such over-strain of these tissues is repeated hundreds of times daily, it will cause stretching of the parts, and later, when this has gone to a certain extent, a process of inflammation of a low grade will be established, which leads to thickening and softening, and subsequently to

contraction and stiffening, of the leaflets of the valve. You will not be surprised, therefore, to learn that such disease of the aortic valves is far most frequently found in men, and especially in those whose occupations compel them to make just such exertions as are above described. I have said that the gradual production of disease of the aortic valves under such influences is easily understood; but I wish further to direct your attention to the question whether it is possible that, in a person having no disease whatever of the heart or aorta, a sudden and most extreme effort with the muscles of the trunk and arms should cause such abrupt and violent stretching of the aortic valves as to rupture one of them, or tear it loose from its points of insertion.

It is by no means rare to find, on examining aortic valves which have been the seat of advanced disease, a laceration of one of the leaflets extending from the free border to a varying depth in the valve. The edges of the laceration are irregular, and the entire valve is thickened, and often calcareous and brittle. In such cases there has been a history of long-standing aortic disease with increasing amount of regurgitation, and of course the solution of continuity of one of the leaflets must have greatly favored this. I have found, more frequently than the above condition of laceration, a partial condition of separation of two leaflets from elongation of their common line of attachment to the aortic wall. This extremity of the leaflets is therefore no longer inserted on the normal level, and in consequence their free border must usually be more or less reverted when subjected to the pressure of the column of blood in the aorta, so that in this case also considerable regurgitation takes place. It will be found that valves which have been thus partially separated invariably present evidences of disease, and are thickened and usually shortened. The difficulty in such cases lies in determining what the condition of the valve may have been at the time the laceration or separation occurred.

In most cases there is no history of any sudden violent exertion followed immediately by symptoms of frightful disturbance of the heart's action, such as would ensue upon such an accident, but rather of gradually increasing cardiac disease, with occasional acute aggravations from ordinary causes; and the evidences of long-standing disease are so marked as to render it clear that the lesion of the valve has been the result of diseased action.

In some rare instances, however, the development of the symptoms of insufficiency of the aortic valves is so sudden, and comes on in the midst of apparent health, or after such slight evidences of cardiac disease, as to render it more difficult to decide as to the previous state of these valves. I know of no case upon record where such an accident has been suspected, and where death has occurred soon afterwards and it has been proved that a laceration of a previously healthy valve has really taken place. It has always happened that life has been prolonged for some time; and it then becomes difficult to determine with certainty whether the evidences of

disease of the valve have been entirely the result of the injury to its tissues, or whether there was not some previous morbid state which so weakened the valves or their attachments as to indirectly cause their rupture or separation. Although I cannot deny the abstract possibility of the laceration of a healthy valve, I am inclined to believe that the other will uniformly be found the real state of the case, as it undoubtedly was in the following remarkable case of almost complete separation of two aortic leaflets from the line of their common attachment to the wall of the aorta.

Case.—D. D., aged 35 years, a bar-keeper, first came under observation in the summer of 1868. He had enjoyed general good health until within a few years, when he suffered from several attacks of sub-acute rheumatism. For about eighteen months previous he had also felt some oppression and palpitation of the heart on exertion or after excitement. His habits were very intemperate and dissipated; but there was no evidence of his ever having had syphilis.

In April, 1868, while struggling to turn a windlass to raise a very great weight, he felt a sudden severe pain and sense of failing or *giving way* at the præcordia. He staggered and had to be helped to a seat. Those who helped him asserted that a curious whirring or fluttering sound became suddenly audible even to the distance of a foot from the chest, and at the same time violent tumultuous action of the heart (which had never before been noticed) became readily visible. He was obliged to throw open all his upper clothing, and beat himself upon the chest and clutch at his throat, in the extremity of his distress. Orthopnoea continued, and he passed the entire night sitting by an open window. The following day he began to spit blood quite freely. The pulse was estimated by the physician who first saw him to be 212 in the minute. No systematic treatment was adopted, save moderate stimulation and counter-irritation over the præcordia.

When first seen by me, fifteen days after the accident, his condition was as follows: Surface very pale; extremities cold and damp, and some œdema of the feet; mind dull, with occasional slight wandering; respirations (sitting) 35 in the minute, and labored; frequent cough, with expectoration of pure unœrated blood in large mouthfuls. Over both lungs, especially posteriorly, the respiratory murmur was accompanied by a fine crepitant râle, heard only at the end of inspiration. No fulness or pulsation of the jugulars; flapping, jerking, but feeble pulsation of the carotids at the base of the neck, and a faint murmur heard along the course of these vessels; radial pulse feeble, very small, 186 in the minute. The impulse of the heart was feeble, without any fremitus; the apex-beat was extended, and lay to the left of the vertical line of the nipple, and too low down; the area of cardiac dullness was somewhat increased; the heart-sounds were confused and tumultuous; at the apex no positive murmur could be detected, and there was no murmur transmitted towards the left axilla or heard at the angle of the left scapula. No murmur was audible at the xiphoid cartilage. At the third interspace, close to the left edge of the sternum, a distinct, short murmur was heard, which could not be timed, owing to the rapidity of the heart's action; it was transmitted up along the left edge of the sternum to the second interspace. At the aortic cartilage, a confused, tumultuous sound was heard which defied analysis.

He was ordered turpentine stupes to the chest; beef-tea and milk-punch. Tincture of digitalis was given also, in doses of gtt. x every third hour. On the fourth day the dose was increased to gtt. xx; and the next day, finding no relief was produced, another specimen of

digitalis was obtained and given in doses of gtt. x, q. t. h. After thirty-six hours' use of the latter, hæmoptysis ceased entirely; respirations fell to 24, and grew more easy and full; œdema diminished, though there was still some puffiness of the feet and face; pulse much fuller and stronger, 92 in the minute, distinctly jerking; heart's action much better accentuated and stronger; no murmur at apex or at epigastrium. There was, however, a strong murmur, distinctly diastolic, large and moderately harsh, heard at the third left interspace, and thence upward to the second left interspace, and more strongly across and upwards over the sternum to the second right interspace. The digitalis was continued in reduced doses. The diagnosis was made of laceration of one of the aortic valves, with probably some pre-existing disease of their tissue.

The subsequent history of the case can be briefly sketched. The patient lived over five years afterwards, and died suddenly on the 20th of September, 1873.

During this long period he never regained health sufficiently to return to work even of the lightest kind. He was able at times to walk a few squares, but much of each year was confined to the house. He suffered several times from attacks of articular and muscular rheumatism, which yielded readily to the use of opium and iodide of potassium and acetate of potassa in full doses. Usually the action of his heart was regular,—75 to 80 a minute,—and he suffered only from a sense of weight at the præcordia. But at irregular intervals he also suffered from terrible attacks of cardiac disturbance, brought on by over-exertion or occurring in connection with rheumatic fever. Then the action of the heart became tumultuous and very rapid: on repeated occasions I have counted it at 190, 200, 220, and have known it so much more rapid than this that I could not follow it at all. The heart gradually underwent enlargement, the area of dullness increasing, and the area of impulse extending, while the impulse grew heaving. The physical signs continued to indicate extensive aortic regurgitation: a loud, long, and rather hoarse diastolic murmur was heard very strongly all along the sternum, and at the second right interspace. It was equally intense at the xiphoid cartilage as at the latter point. It was transmitted also to the apex, though with rapidly lessening force. It was also transmitted along the arch of the aorta and into the great arteries; though here it lost its purely diastolic rhythm and became a prolonged bruit, occupying part of both periods of the heart's action. No other valvular murmur was heard. There was marked visible jerking pulsation of the arteries. The man's appearance was always characteristic of extreme anæmia of the arterial circulation. His surface and mucous membranes were very pale, and the pupils dilated. No symptoms of embolism presented themselves at any time. There was occasionally slight return of hæmoptysis. No enlargement of the liver or the spleen, and no albuminuria, occurred.

His treatment consisted in careful regulation of diet, clothing, and exercise. So long as the action of the heart continued regular and almost normal in frequency, he only took at intervals courses of iodide of potassium or of arsenic. Many transient disturbances of different functions also needed simple treatment. His great source of relief was, however, digitalis. On every occasion when his heart became excited and hurried in its action, a sign which was always followed by grave symptoms so soon as the pulse-rate reached 120 to 150, I placed him on the use of tincture of digitalis, in doses of ten drops every five, three, or two hours, according to the urgency of the symptoms, and then, as they subsided, gradually reduced the frequency of its administration. Its use never failed to give prompt relief. The pulse grew slower, fuller, and stronger; cardiac pain and oppression diminished. In no instance did any

disagreeable, much less any dangerous, symptom attend its action.

About the 10th of September I saw him, after a long interval caused by my absence from the city, and found him much exhausted by intense pain in the cardiac region, which had lasted several weeks. The pain was sharp and cutting, and extended round the base of the left chest, along the sternum, and through to the spine. The pulse was extremely frequent and feeble; the heart's action tumultuous, weak, and undulatory. Under the prompt use of digitalis and quinia he soon began to improve, and the amount of digitalis had been for several days reduced to five drops twice or three times a day, when, without any warning, he fell dead from his chair.

The autopsy was made twenty-four hours after death, the examination being limited to the thorax and the abdomen. There was no trace of dropsy. The liver was too firm, and presented partial nutmeg congestion. The spleen was one-half too large, its tissue too firm, with enlargement of trabeculae, but without emboli.

The kidneys were not enlarged; their capsules were thickened, but could be stripped off, bringing away a few little bits of tissue. The cortex was coarse-grained and hardened. The whole organs were much congested; there were no emboli.

The ribs were very firmly ossified. The lungs were adherent throughout; their tissues essentially healthy.

The arch of the aorta was much dilated; the entire width of the vessel when opened being about 5". Its walls were much thickened, and highly atheromatous. This condition was most marked near the heart, and gradually diminished in the abdominal aorta. The subclavians and iliacs were but slightly atheromatous. The pulmonary artery was also dilated.

The heart was much enlarged, and weighed, after careful washing, twenty-five ounces. The *right ventricle* was moderately dilated, and its walls somewhat thickened; the tricuspid valve appeared healthy. The valves of the pulmonary artery were somewhat enlarged, but healthy. The left ventricle was the seat of the greatest enlargement. Its walls were in places $\frac{3}{4}$ " thick, and its cavity much dilated. The muscular tissue was hard and reddish. The mitral valves were healthy, and stood the hydrostatic test.

On opening the aorta there appeared to be but two leaflets, one of which was somewhat larger than normal, while the other was almost twice as large. On examining this latter one more carefully, it was found to be composed of two leaflets which were fused together, their common attachment to the aortic wall having been separated along the entire line from its highest point down to the level of the base of the valves. This abnormal leaflet was quite easily reverted into the cavity of the ventricle, and would then of course have caused very great insufficiency of the aortic valves. Even when it was not so reverted, the hydrostatic test showed considerable regurgitation through that orifice. The line of the former attachment of these leaflets was marked by a Y-shaped elevation on the inner surface of the aorta. This did not altogether resemble ordinary atheroma; it was grayish-white, firm, and fibrous in texture, and seemed like the cicatrix of a branching linear ulcer or rent of the lining membrane. It had undergone none of the secondary changes (alterations of color to a yellowish tint, softening, or calcareous change) which were seen in most of the neighboring atheromatous patches. The leaflets themselves were thickened and too rigid; their ventricular surface was smooth and entirely free from vegetations, but along the arterial face of the base of attachment there were irregular calcareous formations.

In reviewing this interesting case and observing the abruptly sudden development of symptoms of

extreme aortic regurgitation, there can, I think, be felt no doubt that at the moment when the violent muscular effort was made there was a forcible separation of the leaflets from one of their lines of attachment, as above described. I have also but little doubt, considering the very advanced atheromatous changes in the aorta, and the positive symptoms of cardiac disturbance presented by the patient for a year previous, that there had been some pre-existing disease of the aorta, which impaired the consistency of its inner coats and thus favored the occurrence of the laceration.

In its clinical aspects the chief interest of the case lay in its treatment. There could be no uncertainty as to the diagnosis, since the characteristic symptoms of aortic regurgitation and the ordinary effects of the primary lesion, both upon the other parts of the heart and the system at large, were all present. The only remarkable symptom in this case was the rapidity of the pulse, which at times exceeded anything I have ever known in an adult. It is impossible to imagine a case which would illustrate more perfectly the value of digitalis in cases where the muscular walls of the ventricles are overstrained and contract feebly and frequently. Clinical experience and physiological experiment have at last definitely settled that the first and most important action of digitalis upon the heart is to increase its power of contraction. In cases like the present, therefore, where an overwhelming strain is brought upon the ventricles of the heart, under which their walls are yielding, this drug may be used fearlessly and freely. Under its action the pulse will become slower, fuller, and stronger, and the most alarming symptoms of disturbance of the circulation will subside. The amount to be given daily must depend solely upon its influence upon the heart. I rarely give more at first in any case than ten drops of a good, reliable tincture every five hours, and, if necessary, increase it gradually to every two hours; and in very few suitable cases will this fail to afford very great relief. It is true that in diseases of the aortic valves sudden death is especially liable to occur; and this tendency is strikingly illustrated by the present case. Formerly a great deal was said about the danger of using digitalis freely or for a long time, for fear of its finally producing serious or fatal depression of the circulation by its cumulative action. It is certainly true that when pushed beyond the limits of safety, and especially when given in unsuitable cases, digitalis produces dangerous depression of the circulation. Even in such cases, however, there is generally warning of the approach of danger. But in cases where its use is markedly indicated, I have never seen injurious effects from the administration, under careful watching, of ten drops of the tincture every four, three, or even two hours, until slowing of the pulse begins to be noticed, when the frequency of the dose should immediately be reduced. In the case now reported it not only produced no disagreeable effect, but it is quite certain that on repeated occasions attacks so severe that they would have proved fatal unless promptly relieved, yielded readily and safely to its action.

ORIGINAL COMMUNICATIONS.

PATHOLOGICAL DENTITION.

BY JAMES W. WHITE, M.D.

DENTITION, though a physiological process, is nevertheless recognized as a frequent cause of constitutional disturbance. Doubtless there are extremists who overestimate the average influence of this process as a disturbing element, as there are those who underrate the difficulties which may attend it. Pathological dentition is by many considered a secondary affection,—a single link in a chain of deranged actions,—and, even when a little patient indicates unmistakably the local irritation, relief is sought by general medication,—relaxants, derivatives, calmatives, febrifuges, etc.; then by local emollients, fomentations, and anodynes; and lastly, if at all, by lancing the gums, when redness, tumefaction, induration, or the whiteness of the coming tooth seems to demand it. These signs are indeed assumed to be the only possible justification of the operation. If the gums are tumid, tense, and shining, swollen up into a kind of little tumor over a particular tooth; if an unhealthy ulceration with a sloughy appearance forms upon the summit of the gum; then, say our text-books and writers upon the diseases of infancy,—then we may sometimes resort to incision of the gum.

"In forming a diagnosis," says one of the highest authorities, "whether a disease present during the time of teething is consequent upon some derangement of this process, or upon an abnormal condition of some other organ or organs of which the dental difficulty is but itself a symptom, the state of the jaws must be the principal guide. If, in the presence of symptoms which might arise from teething, we find that the teeth are not pressing forward towards the surface of the gums, and that the latter maintain their normal appearance, it will be useless to have recourse to the gum lancet." Young practitioners are cautioned, by a recent writer, not to display their ignorance by the use of the lancet, except the *local* indications imperatively demand it. The local signs, it is to be inferred, are tumefaction, redness, induration, ulceration, and the whiteness of the presenting tooth. The direct pressure upon the fibrous tissue is thus assumed to be the cause of the various and serious complications which are too frequently associated with the period of the primary dentition. It is doubtless true that a hyperæmic condition of the gums may be caused by the growth or eruption of the teeth proceeding more rapidly than does the absorption of their integumental covering, and that the undue pressure thus caused may occasion trouble, by the irritation of the nerves of the gum-tissues,—manifested locally by tumefaction, soreness, redness, or ulceration; systemically, by fever, irritability, sleeplessness, etc. It is also admitted that judicious treatment of pathological dentition should in all cases include hygienic care, and that constitutional medical, as well as local surgical, interference is generally demanded. Nor is it claimed that in the perversion of this physiological

process is to be found an explanation of all the ills to which human infancy is heir; but we assume that pain so intense and unremitting as to destroy the appetite for food, to cause wakefulness, irritability, thirst, fever, diarrhœa or constipation, congestion, convulsions, and death, may be due to the irritation of dentition *without the existence of a single local indication*. In other words, that the most serious complications of dentition are not caused by the pressure of the advancing tooth upon the gums, but by the backward pressure of the resisting gums upon the developing and sensitive *pulp*, giving rise to a true toothache, comparable only to that exquisite torture which is experienced in after-life from an exposed and irritated pulp.

If such a condition of things is possible, it will readily be seen that there can be no question as to the extent of the mischief which may result. The association of the fifth pair of nerves, which supplies the dental filaments, with the great sympathetic so connects the teeth with the entire economy that the pathological bearings of such deranged action may not be limited. That such a condition may exist will be readily understood, if it is remembered that at the period of eruption the roots of the teeth are as yet incomplete; that instead of the conical termination and minute foramen which characterize perfected teeth, the aperture is quite large, and its edges thin and sharp. In estimating, therefore, the amount of constitutional disturbance which may result because of a want of accordance between the eruption of a tooth and the absorption of the superimposed tissues which impede it, we may imagine the sensitive pulp, made up of arteries, veins, and nerves, in a condition of irritation from augmented vascular and nervous action,—a morbid activity of the process of dentition,—followed by determination, stasis, and congestion, producing a hyperæmia sufficient to cause the protrusion of the mass from the incomplete aperture of the root; which, being pressed upon by its thin, sharp edges, is sufficient cause for any amount of constitutional disturbance of which it is possible to conceive.

Under such circumstances it is not difficult to comprehend the inefficacy of any or all hygienic measures; of relaxants and febrifuges; of local emollients and anodynes. It is also easy to understand how the thorough lancing of the gums, over the tooth or teeth thus situated, may, by removal of the pressure, give a relief so immediate and complete that there shall be no room for doubt as to the correctness of the diagnosis.

The *general* indications of what may not inaptly be termed infantile odontalgia are precisely what might *a priori* be expected. The child, at first simply uneasy, becomes by rapid stages fretful, troublesome, peevish, cross, vindictive; cries persistently, or stops crying only to scream; or, if quiet for an instant, will be found to have its thumb or fingers thrust between the jaws, the chewing upon which seems to afford a momentary cessation of anguish, but only momentary. It refuses food, throws down its toys if handed to it, as though in a passion, and is outraged by any attempt to amuse

it. To these persistent unmistakable evidences of irritability are added a flushed face, corrugated brow, compressed lip, intolerance of light, and disturbed, broken sleep, the desire and effort to sleep seeming to be thwarted by fresh accessions of pain, until the little one sinks exhausted into a troubled slumber, but of short duration. Concomitant with these manifestations, or quickly succeeding them, will be some of the various systemic complications, too frequently with fatal ending, and still *no local indication* of the trouble which is consuming the young life.

A case recently under the care of the writer afforded a marked confirmation of these views. A child one year of age, with the four superior and two inferior incisors in position, after three weeks of restlessness, wakefulness, loss of appetite, fever, paroxysms of pain, and rapid emaciation,—all without obvious cause, certainly without the slightest local indication of trouble in the mouth,—was *cured* by free crucial incisions over the molar teeth, the improvement being so evidently the result of the operation that the relation of cause and effect was plainly recognized by every member of the family.

Such cases are not exceptional, and suggest a more careful investigation of the developmental processes of dentition in otherwise unexplainable diseases of infancy.

NOTES OF HOSPITAL PRACTICE.

PENNSYLVANIA HOSPITAL.

SERVICE OF DR. R. J. LEVIS.

Reported by JOHN B. ROBERTS.

ANEURISM OF THE SUBCLAVIAN ARTERY.

JAMES M., aged 41 years, was admitted with a large aneurism of the right subclavian artery, which has been recognized only about three weeks previously to his applying at the hospital for treatment. It has evidently existed much longer, however, for he has complained of pain in the right chest and down the arm for nine months, and the clubbed fingers of the right hand show conclusively that the tumor has acted for a long time as an impediment to the return of venous blood.

A pulsating tumor, with distinct aneurismal thrill, is seen jutting above the clavicle, and below that bone another swelling is felt, in which the thrill, however, is almost absent. It is difficult to determine whether this lower tumor, below the clavicle, is a portion of a large aneurismal sac bulging out between the first and second ribs, or a dilatation in the continuity of the vessel as it becomes axillary, after it has passed under the clavicle; in other words, whether the aneurism is entirely subclavian and intra-thoracic, or involves the subclavian and its axillary continuation. The aneurism certainly includes the entire subclavian artery, and probably a portion of the axillary, but how far it extends towards the heart is uncertain, for there may be some dilatation of the innominate, although the primitive carotid seems to be normal.

Aneurisms, when not traumatic, are the result, usually, of atheromatous change in the arterial coats, which so interferes with the contractility and nutrition of the vessel that atrophy takes place. The weakened

coats are then dilated by the constant pressure of the blood, until an aneurismal sac is formed, or rupture takes place from a sudden increase of intravascular tension by excessive emotion or severe exertion. In the treatment of aneurism it is of great importance to consider the extent to which this process has advanced; for the surgeon must be influenced in the choice of operative procedures by the condition of the coats of the artery.

The cure of aneurism depends on the formation of a clot in the sac by deposition of fibrin from the blood; and accordingly many methods have been suggested to produce this result. One of the oldest plans of treatment is ligation, by which the current blood is arrested and an opportunity given for lamination of fibrin to fill up the cavity of the sac.

The ligature may be applied upon the vessel far above the tumor, as first performed by Hunter, or below it, as in the distal operation suggested by Brasdor; in either of which cases it is necessary to select, as certainly as possible, a portion of the vessel free from disease.

In this patient the Hunterian operation is impracticable, for, as the tumor involves the entire subclavian, the ligature would have to be placed around the innominate artery, which lies deep in the neck behind the upper bone of the sternum, and has large venous surroundings. A most important objection, moreover, is the fact that the innominate is so short and gives off such large branches that there is not room for a firm clot to form, as was shown in the only successful ligation of this artery, where the additional ligation of the vertebral was necessitated.

The distal operation upon the axillary is, therefore, the one to be adopted in this case, if it be decided to trust to ligation; but an objection is that should the vessel be atheromatous, and secondary hemorrhage supervene, there would remain no point higher up to which a ligature might be applied. The ligation of the carotid also would probably be required, for the aneurism extends so near to the bifurcation of the innominate into the subclavian and the carotid that the current in the latter would interfere with fibrinous deposition in the sac.

Partial and complete compression have also been resorted to for the cure of aneurism, depending for their efficacy in diminishing or entirely arresting the circulation and allowing a deposit of fibrin.

In a case of internal iliac aneurism in the hospital, Dr. Levis succeeded in effecting cure by *complete* or rapid compression upon the cardiac side of the tumor for five hours and twenty-five minutes. This plan has of late become quite popular, being particularly adapted to treatment of aneurism of the abdominal aorta and other large arteries, for it produces complete stasis of the blood, and, if anæsthesia be kept up, is unattended with great suffering.

As spontaneous coagulation occasionally takes place in the dilatation, attempts have been made to accomplish this by the injection subcutaneously into the sac of tannic acid, subsulphate of iron, and other astringent solutions. These efforts have been attended with at least some degree of success; but the clot generally sets up a high inflammation by acting as a foreign body. Many other methods have been tried, among which may be mentioned violent manipulation of the tumor in order to detach the fibrinous laminæ usually adherent to the inner walls of the sac, so that some of the detached material may plug up the distal extremity of the aneurism and stop the current of blood.

It has occurred to Dr. Levis that coagulation might be induced by introducing into the cavity of the aneurism, through a capillary tube, a number of horse-hairs

one after the other, which, by acting as remora on the blood passing through them, would entangle upon them a large quantity of fibrin; and it is his intention to attempt the radical cure of aneurism of the great arterial trunks of the thorax and abdomen by this means in cases which are not amenable to treatment by the usual operative methods of ligature or compression.

This subclavian aneurism is perceptibly increasing, and it will continue to dilate until it bursts into the pleural cavity, the trachea, the œsophagus, or the subclavian vein, if not soon successfully treated; but at present nothing will be done, except to place the man on a good *nitrogenous* diet, in order to increase, if possible, the quantity of fibrin in the blood; and to tranquillize the circulation by digitalis and the recumbent position.

In the mean time the most careful physical exploration of the extent of the aneurism and its possible complications will be made, and serious consideration given to means for relief from a condition in which, sooner or later, a fatal termination must otherwise be expected.

CASES OF OVARIOTOMY.

BY WASHINGTON L. ATLEE, M.D.,

Of Philadelphia.

Reported by J. EWING MEARS, M.D., of Philadelphia.

CASE 246.—*Multilocular ovarian tumor—Incision five inches in length—Slight parietal adhesions—Recovery.*

December 13, 1871, Dr. Atlee visited Miss E. B., of Schenectady, New York, in consultation with Dr. A. M. Vedder. The patient was 46 years of age, a teacher by profession, and, until October, 1871, had enjoyed general good health. Menstruation began at the age of sixteen, and has, at times, been irregular and excessive. In August, 1871, she noticed that her dresses were getting tight, and she suffered somewhat from dyspnœa; œdema of the lower extremities was also present.

Previous to the time when Dr. Vedder took charge of the patient, she had been treated with drastic purgatives, and had been rigidly confined to bed.

On examination, Dr. Atlee found the abdomen as large as is usual at full term of pregnancy, and quite uniform in shape. There was resonance on percussion over the right lumbar region and the upper border of the abdomen; at all other points dulness on percussion was marked. The abdomen was tense; several hard masses could be felt on palpation, occupying chiefly the umbilical and left lumbar regions. Fluctuation was imperfect, being more distinct in the right lumbar region. The pelvis was free, the uterus was central in position, and the cervix was normal. The sound could not be introduced; the tumor could not be moved by deep inspirations. The diagnosis of multilocular tumor of the left ovary, with parietal adhesions, was made.

Ovariectomy was performed, the following gentlemen being present: Drs. A. M. Vedder, J. D. Jones, R. M. Fuller, M. G. Plank, B. N. Myndevre, Pease, Niles, and F. Ellwood, of Schenectady, and G. S. Beckwith, of Charleston, N.Y.

The tumor involved the left ovary, was multilocular in character, and was attached to the anterior wall of the abdomen by adhesions which were easily detached. The pedicle was of good length, and was secured by a three-quarter inch Atlee clamp. The patient made a very satisfactory recovery, although she suffered from bedsores which resulted from long confinement in bed in one position previous to the operation.

TRANSLATIONS.

TRACHEOTOMY BY THE ACTUAL CAUTERY.

By MM. F. DE RANSE and MURON. Translated from the *Gazette Médicale*, No. 38,

BY GEORGE S. GERHARD, M.D.

THE interest with which we listened to the subject of tracheotomy by the actual cautery, communicated to the Société de Médecine by M. de Saint-Germain, led us to institute some experiments, the results of which we are now able to record. The object of employing the actual cautery in tracheotomy is to prevent hemorrhage, and thus to do away with one of the principal difficulties with which the surgeon has to contend.

There are a certain number of cases in which hemorrhage occurs on the first incision to such an extent as to mask and render more delicate the subsequent steps of the operation.

The actual cautery is simply a substitute for the galvano-cautery, which has been employed by M. Verneuil in tracheotomy. The priority of performing the operation, therefore, belongs to the eminent professor; and if we prefer the actual cautery to the galvano-cautery it is because the latter is not in the hands of every surgeon.

We think that the actual cautery, by preventing hemorrhage, will render the operation of tracheotomy more simple, and that a physician who formerly recoiled from its performance will now no longer hesitate to attempt it.

For these reasons we propose to give in detail the different steps of the operation as we performed it upon animals (dogs).

The first question which presents itself concerns the choice of instruments. At first we employed an ordinary table-knife with a rounded end; but afterwards we had a very small instrument made by Mr. Cohn, which divided the tissues only so far down as the trachea. A table-knife is undoubtedly the most practicable, because it is so easily obtained; the only objection to it is that its extremity is sometimes so thin that the skin and cellular tissue are divided too slowly, and the former as a consequence becomes cauterized to an unnecessary extent. If, however, a knife with a stout extremity be selected, an immediate division of the tissues will be effected without cauterizing the skin beyond the cut.

To completely divide the tissues as far down as the trachea, two table-knives are generally sufficient; but, in order to be prepared for any accident that may happen, we think it prudent to be furnished with three or four.

The extremity of the knife, having been heated bright red to an extent of two centimetres, should be applied firmly to the skin at a point one centimetre below the cricoid cartilage, and held steadily, lest too large a wound be made.

The instrument we prefer consists of a flattened elliptical piece of iron supported by a handle seven or eight centimetres long; the latter has a roughened extremity, so that it may be tightly held by a pair of forceps. The cautery is irregularly elliptical, one end being larger than the other, and is, therefore, readily adapted to the age of the patient. The cautery, having been heated bright red, is firmly held by a pair of forceps, and when the patient's head has been extended the larger end of the instrument is applied to the skin at the point before indicated, below the cricoid cartilage. It is important to stretch the tissues at the moment of the application, in order to facilitate their section. The skin and the subcutaneous cellular tissue are thus rapidly divided.

Separating the edges of the wound with a pair of ordinarily strong forceps, and returning the cautery, which has cooled considerably, the aponeurosis and all other tissues are divided, and the trachea is brought to view. So soon as the trachea is exposed, we think it advisable to withdraw the cautery, for fear of denuding the cartilages and causing necrosis.

Separating the divided tissues with the same pair of forceps, the trachea is divided with a bistoury. The edges of the tracheal wound are separated by means of a Laborde dilator, along the inferior branch of which a canula is readily made to pass. We heat the cautery to a cherry-red color because the skin and the cellular tissue are thereby more rapidly divided,—a result which is not attended by any bad consequences, because the vessels of these tissues are not large enough to give rise to hemorrhage. During the first step of the operation the cautery cools, and when the more deeply-seated tissues are about to be divided the obliteration of the vessels is certain.

We stated at the commencement that the object of the operation by the actual cautery was to prevent hemorrhage; let us see if this end is always attained. In twenty-two operations upon dogs, hemorrhage occurred but twice; in all other instances the tissues were perfectly dry, and at the bottom of the wound the trachea could be distinctly seen. The slight hemorrhage that occurred in two cases was due to our attempting to divide too great an amount of tissue with the same part of the instrument; the vessels were divided, but the cautery was not hot enough to obliterate them completely. An important point to be borne in mind, after dividing the skin and the cellular tissue, is to employ the smaller and thicker end of the instrument in dividing the more deeply-seated tissues. In no instance, when this precaution was taken, did hemorrhage occur.

In addition to the complication from hemorrhage, which, as we have already stated, is easily prevented, we ought to mention another, consisting in a partial necrosis of one or two cartilages of the trachea and causing eventually slight stricture. The danger of the occurrence of necrosis may be easily avoided. The cautery divides all that it encounters: when it reaches the trachea it meets with a certain resistance, but the perichondrium may be destroyed, and as a consequence a disturbance of nutrition occurs, resulting in partial necrosis. As we have already stated, we should, so soon as the trachea is exposed, withdraw the instrument and employ the bistoury.

RESEARCHES ON PSEUDO-HYPERTROPHIC MUSCULAR PARALYSIS.

By BERGER (*Deutsches Arch. für klin. Med.*, 1872, Bd. ix., Heft 4, 5).
Translated from *Archives Générales de Médecine*, Août, 1873.

By ENRIQUE M. ESTRAZULAS, M.D.

IN the cases of this disease studied by Berger, new features are added to the train of symptoms usually recognized as belonging to it, and consisting of various troubles of sensibility. These troubles are of hyperæsthesia and anæsthesia relating to the various modes of sensibility,—tact, thermæsthesia, pain. He maintains that the disease always begins in the lower extremities, being generally accompanied by violent neuralgic pains and formication in the affected muscles. Later this gives place to anæsthesia. Also, he has found that fibrillar contractions are of constant occurrence.

The enlargement of the paralyzed muscles is, according to Duchenne, due to hypertrophy of the interstitial connective tissue, the muscular fibre remaining normal, or becoming atrophied afterwards by the compression exerted by the hyperplasia of connective tissue.

In two cases where the author had an opportunity of examining the muscles microscopically, he found a complete absence of proliferation and of fatty degeneration in the interstitial connective tissue, and a true hypertrophy of the muscular fibril,—hypertrophy so developed as to account by itself alone for the development and enlargement of the limb.

The author is far from denying the correctness of Duchenne's microscopical researches, but he thinks that the latter has observed the disease at different periods from himself. Berger has studied it at the beginning, and found a true hypertrophy of the muscular fibril, and later (and here he agrees with Duchenne's observations) the connective tissue begins to proliferate and in turn hypertrophies, thus compressing the muscular fibre and occasioning its atrophy.

There are, then, two anatomical stages to be recognized in the disease,—the first characterized by a true muscular hypertrophy, and the second by a hypertrophy of the interstitial connective tissue and the subsequent atrophy of the muscular substance. The first stage is clinically marked by neuralgia, hyperæsthesia, and anæsthesia, and afterwards feebleness, but not abolition of motility; the second, by true paralysis, in company with considerable increased volume of the affected muscle.

The author then reviews the different hypotheses that have been advanced in regard to the nature of the disease. Duchenne attributes it to a paralysis of the vaso-motor nerves; Stofella, to a cerebral lesion; Gneisinger, to a primitive muscular lesion; but according to Berger the muscular alteration is not due to a trouble of the vaso-motor nerves, but to a trouble of the trophic nerves. The trophic nerves destined to a muscle appear not to follow the track of the motor nerves, but that of the sensitive ones, and hence the frequency of troubles of sensibility accompanying the trophic lesions of the muscles.

The trophic nerves probably act as moderators of the nutrition of elements, since their destruction is followed by an irregular and exaggerated hypertrophy of the elements they supply, and the atrophy only comes later after a lapse of time more or less long. In conclusion, Berger believes himself authorized to place the pseudo-hypertrophic paralysis among the muscular tropho-neoroses.

DEATH FOLLOWING THE EMPLOYMENT OF THE STOMACH-PUMP.

Translated from the *Gazette Hebdomadaire*, September 26, 1873,

By GEORGE S. GERHARD, M.D.

AN inquest was made on the 21st inst. on the body of a man fifty years of age. It appears that the deceased, who had been intemperate, was in the habit of taking every day an ounce of tincture of rhubarb as a stimulant. At seven o'clock on the morning of the 16th of August he went to the apothecary for his accustomed dose, but after having swallowed it he observed that it had an unusual taste. The apothecary, finding that he had given laudanum to the patient instead of tincture of rhubarb, at once administered an emetic dose of sulphate of zinc. One physician who was summoned gave three pints of warm water, and another proceeded to the use of the stomach-pump, but the tube first employed was too large, and a smaller one also failed to pass. Ten grains of sulphate of zinc were administered, with the effect of producing copious vomiting, but the patient died three days afterwards, without having presented a single symptom of narcotic poisoning. He complained of pain in the throat, and was unable to swallow. At the autopsy there was found a

stricture of the œsophagus, probably of a malignant nature, which explained why the tube failed to pass. Above the seat of stricture the œsophageal wall, which was very thin at this point, was found to have been perforated by the tube. The patient, before the accident, had not presented any symptoms of stricture of the œsophagus. The jury exonerated the two physicians from all blame, and rendered a verdict of accidental death; they considered the druggist, however, as meriting grave censure.

We think that the case in point should not be brought up as an argument against the use of the stomach-pump when it seems to be clearly indicated. No one would think of employing the instrument when a stricture of the œsophagus was known to exist.

The case should teach us to be on our guard when we are using this instrument in cases of poisoning. We, however, believe that the unexpected discovery of a stricture of the œsophagus in one who has been poisoned is of as rare occurrence as the indication for the emptying of the stomach by means of the pump; for, according to our experience, there have been but few lives saved by the operation.

ELIMINATION OF MERCURY.

DRS. MAYENÇON and Bergeret, in a study of the action of mercury (*Journal de l'Anatomie*), found that when one centigramme of the bichloride was injected hypodermically into a dog the metal was to be found in the urine during the following twenty-four hours; when a centigramme was administered during ten or twelve days, the urine contained mercury during the whole time and for four or five days afterwards. They failed to find it in the saliva but did detect it in the spermatic fluid of an embosser. In a ptyalized nursing woman the milk contained as much as the saliva; and the authors detected the drug in the urine of a baby fed at the breast of a mercurialized female.

In a second series of experiments, rabbits were killed at various intervals after the injection of a solution of the bichloride, and their tissues examined. It was found that in half an hour the drug had permeated everywhere, but was most abundant in the liver and kidneys. In four days the mercury given in a single dose was all eliminated, and could not be found in the tissues. By the continuous use of the metal it certainly accumulates and remains in the system. Thus, neither the urine nor the blood of one of the investigators contained any of the metal forty-eight hours after the cessation of a mercurial course. Yet, on taking iodide of potassium, mercury reappeared in the urine, and continued to be present for forty-eight hours.

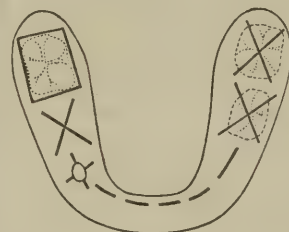
LANCING THE GUMS (*The Dental Cosmos*, February and March, 1873).—Dr. J. Foster Flagg gives the following practical directions for an operation which is too often imperfectly and unskillfully performed. Until recently it has been thought sufficient to make a single straight incision over the coming tooth, and in many instances the mucous membrane has merely been scratched with the point of the lancet; there has been no relief of tension and inflammation, and in not a few cases the result has been fatal.

In making an examination of the gums of an infant over ten months old, the finger should be introduced at the front of the mouth, as thus, the centrals, and usually the laterals also, being fully erupted, all contact with tenderness is avoided. Under the age of ten months the corner of the mouth should be selected. The lancet should be wrapped with a piece of tape, beginning about a quarter of an inch from the point,

and covering the remainder of the blade and a portion of the handle, securing it by slipping the end of the tape under the last turn and drawing it tight. This having been done, that portion of the gum which covers the irritating tooth should be taken gently between the first two fingers of the left hand, the thumb steadying the jaw by resting under the chin or upon the cheek, as thus, in any part of the mouth, the tongue, lips, and cheeks are protected. The incision should be made slowly, steadily, carefully, and gently, passing through the gum until the enamel of the coming tooth is felt, but *only felt*, as this tissue is yet not so hard but that it might possibly be injured by undue force in cutting.



UPPER JAW.



LOWER JAW.

In lancing for the centrals and laterals of both upper and lower jaws, the incisions should be made nearly over the cutting edges of those teeth, but, while the cuts in the upper jaw should be made rather exteriorly to the centre of the alveolar ridge, those of the lower jaw should be made inside of the centre. The single cut over the cutting edge removes, practically, all impediment to complete eruption, for as the teeth become thicker in one direction they become narrower in the other. The object in lancing a little externally above and a little internally below is to offer pathways to the teeth, which shall tend to favor the production of

the normal occlusion by guiding the upper teeth outwardly and the lower ones inwardly.

The first molars (twelve-months teeth) should always be lanced with cervical incisions at least; but a more decided difference exists between those of the upper jaw and those of the lower than between any of the other teeth thus compared. In the upper jaw the cervical incision, as delineated in the diagram, relieves tension over the most prominent points of these teeth,—the buccal and palatal cusps,—while in the corresponding teeth of the lower jaw we should employ the crucial incision, thus, X, because in this way we reach their most prominent points,—the two mesial and two distal cusps.

FOREIGN BODY IN THE CÆSOPHAGUS (*New York Medical Review*, September, 1873).—Dr. D. E. Smith relates the case of a young married woman, who, during an attack of puerperal convulsions, swallowed a partial set of false teeth, four in number, and fastened with a gold clasp. They remained for three days in the pharynx, which was not examined by the attending physician, who declared it to be impossible that the teeth could have been swallowed. At the end of this time, her ingesta having in the mean while been completely fluid, she ate a small piece of beef-steak, in company with which the teeth passed down the œsophagus to a point near the cardiac orifice, where they were arrested by the hook of the clasp penetrating the œsophageal wall. The patient remained in this condition for three months, gradually growing weaker, and undergoing treatment for indigestion, general debility, incipient phthisis, etc., her physician persistently denying the presence of the teeth. A post-mortem examination disclosed the facts to be as above related.

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EDITORIAL.

ETHER AS AN ANÆSTHETIC.

SOME years since, a friend of ours, when on a visit to an English homestead, as he went to dinner was amused by seeing the children peering at him from behind the door, and by hearing one of them say, "Why, he ain't black!" We had thought this purposed ignorance of the existence of America—this purposed ignorance of it and its people—had been battered down by the events of our late war and by our achievements in the arts and sciences. But a London fog is a hard thing to get light through; and in a recent article in the *Edinburgh Medical Journal* Dr. Charles Kidd does battle for the rights of chloroform in a manner worthy of the former time and of his ancient namesake of buccaneering fame. "One or two Americans," he tells us, "have, with an allowable national pride, set up ether as the one thing necessary to save all medical men from ruin; they would abolish chloroform by special act of Parliament, and, as done in America, expel any surgeon from an hospital who would use chloroform in place of the American anæsthetic."

Again he informs us, "To help out this weak agitation, it is shown that, by some American specialty, ether is far preferable; and to men who are ready to advertise the specialty of some American hair-wash, some sewing-machine, or substitute for tea, that chloroform is terribly homicidal, and with an apparatus special, ether, as in America, for what they know, has not had one death; and in France,

at Lyons, the same magic halo of perfect safety has surrounded it: both these latter statements are altogether misleading and erroneous."

Let us, in the first place, assure Dr. Kidd that it is not one or two physicians, but the great bulk of the American profession who stamp the indiscriminate anæsthetic use of chloroform as homicidal; and let us say to him also that, if good taste do not lead him to speak respectfully of his transatlantic brethren, a care for his own reputation ought to induce him to pay some attention to the habits of even such a wild animal as an American before he comments upon them in print and writes such nonsense as that a hospital surgeon would be expelled here for using chloroform. The doctor seems, however, to set little store by his reputation, for he is as reckless in regard to the construction of his sentences and the truth of his asserted facts as to the canons of good taste. The last sentence we have quoted will serve as an example of the preciseness of his style: we leave it to our readers if they can form any idea as to what is meant by ether being "far preferable by some American specialty."

As an example of his scrupulous care in regard to the accuracy of his statements may be cited the following sentence: "The well-known seven deaths at Lyons, and forty-one of the Boston committee, all from ether, are, from insufficient knowledge, forgotten or misrepresented." The real truth is that the Boston committee reported that forty-one deaths had been attributed to ether, but that in many of them to lay the credit of the fatal result to the anæsthetic was simply absurd, and that there was "no recorded case of death known to the committee, attributed to sulphuric ether, which cannot be explained on some other ground equally plausible, or in which, if it were possible to repeat the experiment, insensibility could not have been produced and death avoided."

As the death-roll of chloroform—shall we say?—murders grows day by day,—as even English coroners and English magistrates are becoming restive under the slaughter of the people,—as doctor after doctor, having claimed that his method of using chloroform was safe, is forced to own by bitter experience that he is not, after all, so much more skilful than his fellows,—as these things are so, it seems to us strange that any one should still come forward and practically say, "I hold the giant powers of chloroform for evil, as it were, in the hollow of my hand. Its fatal spirit is bound at my bidding; no death shall occur when I direct."

In view of the various events in the history of chloroform, which must be in the memory of all

our readers, it seems to us nonsense to assert that deaths from it can be avoided by *any* precautions or by *any* skill. The great difference between the two anæsthetics lies in the circumstance that chloroform kills suddenly, unexpectedly, and unpreventably, whilst the ether death is a slow one, and can be avoided, unless in the very rarest of instances. The unrecorded, unnumbered dead from chloroform, our experience leads us to think, are a much greater multitude than is commonly believed. So far as we know, no case of death from chloroform occurring in this city has been recorded; yet we have known of the occurrence of several within a comparatively short time.

A NEW OPERATION FOR ANEURISM.

ON Monday, October 13, Dr. R. J. Levis performed, at the Pennsylvania Hospital, an operation so novel in its conception, so plausible in its theory, and, if it turn out successful, so important in its power of saving life, that it seems worthy of editorial notice. The case was one of subclavian aneurism, involving, it is believed at least to the extent of dilatation, the innominate. Tying the artery has been thought by the surgeons who have examined the case to be of more than doubtful expediency, and Dr. Levis has carried out a procedure which he tells us has long been in his mind. As every one knows, the late Charles H. Moore, surgeon to the Middlesex Hospital, conceived and put into execution the idea of introducing fine iron wire into aneurisms, to afford a nucleus about which clots should form. His practice has been followed in two cases, by Dr. Donville and Mr. Murray, both English surgeons. If we remember aright, in each of these instances the aorta was the artery involved, and the result was unfavorable.

Dr. Levis's idea consists in the use of horse-hair, with the belief or expectation that it will offer sufficient obstacle to the blood-current to cause coagulation, and at the same time, being animal in its nature and not apt to undergo rapid decomposition, like the catgut ligature will cause no irritation and not give rise to suppuration.

The horse-hair was introduced through a fine sharp needle canula, which was plunged into the sac. No difficulty was experienced in its introduction, and twenty-four feet nine inches of it were safely stowed away in the aneurism. In all probability this mass was driven in great part into the distal portion of the aneurism by the blood-current. Be this as it may, a marked diminution in the force

of the pulsation of the aneurism and of the pulse of the wrist was at once induced. This has increased since the operation, the tumor has also gained greatly in solidity, the pain has lessened very much, and no unfavorable symptoms have resulted. As, on the other hand, the radial pulse and the aneurismal throb have never disappeared entirely, and as the dangers of suppuration of the sac are not yet past, it is too early to predict the result.

LEADING ARTICLES.

DYSIDROSIS—RETENTION OF SWEAT.

DR. TILBURY FOX, of London, gives a clinical lecture in the *British Medical Journal* for September 27, 1873, which seems to illustrate clearly the disease which he has recently described under the name of dysidrosis.

The patient was a woman, 36 years of age, and in poor health. Both hands, forearms, and arms were affected with the cutaneous disease. Dr. Fox describes the condition as follows:

"There are scattered papules, which, on close examination, are seen to be in reality vesicles; and also very distinct vesicles, of the size of millet-seeds, some of them having a red base, and in some cases being crowded together in little groups, more or less scattered all over the backs and sides of the fingers, and the back and front of the hand, and the whole forearm (back and front), and the arm up to the shoulder, especially its inner aspect. In some cases the vesicles have run together, so as to form minute bullæ; on pricking these bullæ, a drop of very clear fluid exudes, and it is alkaline. Between the fingers the cuticle is in some cases raised slightly by a layer of fluid beneath. It is white and macerated, especially at the web of the fingers; and the fluid is faintly acid; it is also offensive. There are no crusts anywhere. On the palmar aspect there are scattered, isolated vesicles about the fingers, and towards their tips a number of minute transparent points, resembling sago-grains, are visible under the skin,—some thirty or more. These points are not raised, but are seen through the cuticle, and are clearly sweat-follicles distended with sweat. The front of the arm appears as if it were the seat of diffused eczema. The fluid contained in the vesicles remains perfectly clear until it dries away or escapes, when the cuticle shrivels and peels off or macerates. The patient complains greatly of a burning about the eruption."

Dr. Fox remarks that the affection should not be

confounded with acute eczema, erythema papulatum, miliaria, sudamina, or hydroa. Local treatment is of little avail, except to moderate the irritability and inflammation of the skin. Diuretics and tonics are to be relied upon. Dr. Fox adds,—

"I have termed the disease dysidrosis, because nature seems to have a difficulty in getting rid of the secreted sweat, which remains to distend the follicles and to macerate the tissues. The disease is nothing more than retention of sweat, and its results. Dysidrosis bears the same relation to the sweat-glands that acne does to the sebaceous glands."

L. A. D.

REVIEWS AND BOOK NOTICES.

A SYSTEM OF MIDWIFERY: INCLUDING THE DISEASES OF PREGNANCY AND THE PUERPERAL STATE. By WILLIAM LEISHMAN, M.D.

The author's object in this work, he tells us, is "to furnish to students and practitioners a complete system of midwifery of the present day." The need of such a book, we are informed in the preface, is great, since "in our language scarcely a modern work exists which can be compared with those of Cazeaux and Scanzoni." To this statement we might more readily assent were the magnificent volume of the late Professor Hodge written in a foreign tongue; but, as it exists in our own, it fills, to-day, as completely its place as a text-book of obstetrics as any text-book extant in any of the allied branches of medical science. Whether the work of Professor Leishman be worthy of a similar high rank we will now consider.

First, as to the author's qualifications for the task, we have, quoting still from the preface, the statement that "there are few modern works of approved merit, whether British or foreign, with which the author has not made himself familiar." This claim a perusal of the work proves true. It would be almost impossible to expect familiarity with all the medical ephemera and fugitive literature which to-day meet the eye at every turn, but we can safely say that we know not where in any system of obstetrics to find a compendium so full and so entirely up to the knowledge of the day. The author has added to research the attraction of a singularly graceful and easy style, a clear manner and method, good illustrations, and excellent typography. The illustrations are more than good,—they are remarkably good and pertinent. Especially would we commend those illustrating the position of the head in the different stages of delivery, as on page 327. The wood-cuts, generally, are fresh, and, though at times familiar, are acknowledged; and to borrow another author's illustration with courtesy is rather to honor him than the reverse. The work is in one volume—eight hundred and thirty-five pages quarto; containing forty-five chapters, over one hundred and seventy wood-cuts, and a good index. An enumeration of its table of contents would alone give a correct idea of its fulness and completeness. Purposely, the statistical element has been omitted, and, we think, wisely. While occasionally the views of the author do not coincide with those of many, he can rarely be convicted of ignorance of anything concerning his subject. His description of the mechanism of natural labor is wonderfully clear, though his enumerated positions of the fœtus are at variance with those

generally taught in this country, and those of many continental writers.

They are the four of Nægele, all in the oblique diameters, ignoring the four additional positions in the antero-posterior and transverse. His description of mechanism varies from the commonly taught doctrine. We see no reason to doubt its accuracy, and none at all its intelligibility. He urges the very great importance to the practitioner of early acquiring the tactus eruditus, saying only too truly that where not *early* learned it is often *never* learned; and his directions for making a diagnosis of the position of the head strike us as superior to any we have ever read or heard, so easily remembered and simple are they.

The author discards support of the perineum, and retains the binder, to support the relaxed abdomen and uterus and to preserve the figure, though he does not give as a reason for its use the very important one were all other reasons wanting,—viz., the feeling of comfort which it gives to almost every lying-in woman.

Occasionally the author is funny, as on page 309, where, in speaking of the termination of natural labor, he says, "A single glass of sherry or claret with water may be allowed; but it is truly astonishing how seldom this is necessary." When we think of the condition of parturients in certain sections of our favored land where total abstinence is enforced, we are thankful that it is so, but by no means so astonished as our author.

The author's chapters on the forceps (page 515) are inferior to most of the work, though he evidently has no suspicion of it himself. They may mark an advance in British instrumental delivery, but as a system of teaching they are not equal to our own. Beginning with a history of the invention and describing varieties of the instrument, he gives the indications for its use, and directions for the application of the blades. His personal predilection is for a straight forceps, made somewhat longer than the ordinary straight forceps, being nine inches from the lock to the tips of the blades. These, which are described in the text as straight, are figured in the wood-cut illustrating their application with a decided pelvic curve, probably out of deference to the views of those who object to the straight instrument, and are considered applicable to any case where on introduction the lock is external to the vulva. The author advocates the use of the forceps within the uterus if necessary, saying very truly that "to wait until the lips of the os can no longer be felt is to wait for what may possibly never occur." The necessity of feeling the ear before applying the forceps he considers needful only where a large caput succedaneum has obliterated our landmarks on the cranium, and adds, "But to accept this as a rule for our guidance in every case is both unnecessary and unjustifiable, as the ear, in some cases in which we may hold the operation perfectly justifiable, can only be reached with difficulty or with an amount of violence which may greatly aggravate the sufferings of the patient."

In regard to the method of applying the blades the author's trumpet appears to give a somewhat uncertain though melodious sound. "If possible," he says (page 523), "the blades should be applied to the sides of the child's head. To do this with accuracy, it is necessary that the actual position of the head be made out with perfect certainty. . . . And as there are four possible cranial positions, we must first be sure with which of them we have to deal before we ever take the instrument into our hands. . . . The method of application will depend upon the situation of the head: . . . the nearer it is to the outlet, the more will we require to apply the blades in the transverse diameter of the pelvis. Where, however, the head is higher, its position is more decidedly oblique, and even at the outlet a little of the obliquity still obtains; so that, to *insure*

their application to the sides of the head [our italics], we must apply them," etc. etc. The author then describes the situation: patient on her left side, hips to the edge of the bed; then the administration of chloroform,—evidently considering it as necessary as the previously described warming and greasing of the blades. (The author considers ether, by the way, as dangerous in midwifery, as he believes it induces hemorrhage.) Then (page 526), after describing the method of introduction and reaching the difficulty of locking the blades, he says, "Should this occur repeatedly after partial removal and introduction, it may be advisable to withdraw the lower blade and introduce it with reference to the other, as there is a possibility of a mistake having been committed as to the position of the head, and it is, besides, a matter of far greater importance to have the blades exactly opposite to each other than to have them accurately adapted to the transverse diameter of the head. The best test of a proper application of the forceps is the perfect locking of the blades after their introduction." This is certainly a long way off from the previously quoted advice; and why need a diagnosis be made at all beforehand, if the best test is so easily obtained, and perfect locking by no means implies adjustment to the sides of the head? The writer, in using an instrument very similar to that figured by the author, has succeeded many times in easily locking though the blades were by no means symmetrically applied.

The author, his blades being locked, advises the use both of traction and leverage,—“a swaying movement of the hands.” Using the instrument that he does, he cannot make use of that downward pressure upon the lock which is so valuable in forceps of the Hodge pattern.

Timidity in the use of the forceps characterizes the chapter.

On page 529 we find the following: “This leads us to observe that, if practicable, the assistance of another practitioner should always be obtained,”—advice which we look for in vain in reading the chapter on Embryotomy. Again, page 534, “No one should under any circumstances take the long forceps into his hands without a sense of responsibility much greater than attaches to the ordinary operation.” In fact, the two chapters abound in little touches not at all calculated to steady the arm or reassure the mind of the inexperienced operator. In regard to the long forceps the author entirely gives up all idea of application to the sides of the head. These forceps he describes as the so-called Simpson forceps, with loose locks, and a length of ten and one-half inches from lock to tip. Page 536: “Our object, then,” in using the long forceps, “is not . . . to secure their application to the sides of the cranium, but rather to introduce them with special reference to the pelvic walls.” These forceps also are applied with the patient in the usual obstetric position. In regard to locking, he here also regards it, if perfect, as proof enough of proper application. “But if, on the contrary, we do not succeed in introducing and locking the blades after one or two attempts carefully conducted, we must abandon the case as one unsuitable for the operation.” By this we understand the author to mean, Abandon the forceps—not the case—for some other means of relief; which to us appears like giving up too easily, and too readily falling back upon—we presume, that favorite resort in the United Kingdom—craniotomy and its perils.

Space forbids further remark; but we are convinced that Dr. Leishman's book is destined to become a favorite with all who read it. Chapters and pages like those last noticed—and they are very few—are lost in the many undoubted merits of the work, which we presume will soon appear in reprint in this country. It is to be hoped that the volume will have the advantage of a

careful editor, that it may be made to conform in a few respects with the ideas and customs in vogue upon this side the Atlantic.

SELECTIONS.

ALBUMINOUS EXPECTORATION.

I.

A VERY lively and very long-drawn-out discussion on this subject has occupied a good deal of the time of some of the societies, and of the space of most of the medical journals, of France, since the beginning of the year. The debate appears to be drawing to a close; and we avail ourselves of a spirited summary by M. Labbé in the *Mouvement Médical*, to give our readers a review of what has been said and written on the matter.

A tout seigneur tout honneur. M. Terrillon, last March, defended an unusually good and interesting thesis on the *Albuminous Expectorations following Thoracentesis*. He is the cause of all the commotion; armed by twenty-one observations, of which six are unpublished, he started the debate. He did not wish, he said, in any way to attack the favorable position of thoracentesis; his aim was to draw attention to that phenomenon which M. Pinault was the first to point out in his thesis in 1853, in which he sought to arrive at its rational explanation. In 1869, M. d'Espine communicated to the Société de Biologie two instances of abundant serous expectoration following thoracentesis. In 1872, M. Woillez, in his clinical treatise on acute affections of the respiratory organs, quoted observations of this kind (pp. 4, 8, *et seq.*). M. Marrotte, on May 22, and M. Béhier, on July 30, communicated to the Academy of Medicine facts on the subject worthy of attention.

It will be well to examine *seriatim*, by the light of this discussion, the symptoms and kinds of expectoration which ensue after thoracentesis: the origin of the expectoration, its duration, the nature of the fluid, and its quantity; the mechanical and microscopical examination of the two fluids and the two deposits, one proceeding from thoracentesis, the other from expectoration; and the symptoms and complications. After this, the various hypotheses which have been adopted to explain this accident may well be considered.

The expectoration of albuminous fluid after thoracentesis, according to M. Terrillon, presents three different characters, according to the quantity expectorated, and the gravity or mildness of the symptoms. The mild form is characterized by slight dyspnoea, and by the expectoration of a fluid in which the presence of albumen is revealed by nitric acid, and which varies in quantity from a few up to 700 or 800 grammes, when it has attained a sufficient duration, which may vary in time from a few hours to about a day. The intense form bears the following characteristics: acute dyspnoea; abundant expectoration (1200, 1500, 2000 grammes, and even more); frequent cough, generally spasmodic, accompanied by fine subcrepitant râles. The duration of these symptoms varies from several hours to a whole day. In the third and most serious form, the patient, after twenty or five-and-twenty minutes of comparative quiet, is suddenly seized with acute, very intense, and most painful dyspnoea, with spasmodic cough, accompanied by a frequent spitting of froth, after which death supervenes, with all the symptoms of asphyxia caused by the accumulation of liquids and spumous matter throughout the respiratory system. M. Terrillon relates only two fatal cases out of the twenty-one which he has been able to bring together, to which MM. Béhier and Liouville have added the record of a third. The escape of this albuminous liquid generally takes place from ten

minutes to one hour after thoracentesis. It is of a yellowish color, more or less transparent, according to the amount of expectoration; a persistent froth forms the upper layer, the middle layer being represented by the fluid, and the lower layer by a deposit of mucous products given off by the bronchi. It coagulates when treated with nitric acid.

The analysis made by M. Bergeret includes the daily examination of the two fluids, and the microscopic examination of the deposits of both. The pleural fluid evacuated by operation was, after filtration, amber-colored, alkaline, and poor in mucine. A hundred grammes, treated by an alcoholic solution of carbolic and acetic acids (Méhu's reagent), gave 1.61 grammes of albumen after drying. The expectorated fluid, mixed with mucus, was, after filtration, clear, slightly tinged with red, viscous, alkaline; and, when treated with acetic acid, gave a copious precipitate of mucine; 100 grammes, precipitated by Méhu's reagent, gave 1.42 grammes of dried albumen mixed with mucine. The microscopic examination of the deposit of the expectorated liquid showed epithelial cells in large quantity, together with pus-corpuscles and sometimes red blood-corpuscles. In the deposit of the liquid of thoracentesis, pus-corpuscles only, and very few red corpuscles, were seen.

The question arises, what are the possible relations between albuminous expectoration and the copiousness of the effusion? The cases reported by M. Terrillon show, in the first instance, the abundance of the liquid in the pleural cavity, of which the average was generally from two to two and a half quarts. The most minute care was always observed in the operations. As to the more or less grave complications which may have preceded the operation, it is easy to agree with M. Terrillon, that they could not possibly have had any direct influence on the accident under consideration. The syncopal condition, the cough, the striking of the lung against the canula, the passage of air through the canula, have all been given as predisposing causes; but very reasonable explanations have been opposed to such interpretations of the phenomena. The influence of the nature and age of the effusion on the production of the expectoration has been decisively proved to be *nil*, since the majority of the cases (15 out of 20) were instances of acute pleurisy, in which thoracentesis was performed twenty or thirty days after the commencement of the disease. Nor can heart-disease be really considered as a predisposing cause; since it either did not exist or was not detected in the cases of pleurisy. One circumstance remains to which some importance might be attached: the rapidity with which the pleural liquid made its escape was noticeable in all the cases cited by M. Terrillon. We shall return to this point. The expectoration can certainly not be confounded with bronchorrhœa: its difference of character is quite clear, as shown by the reaction given by adding nitric acid.

We now arrive at the hypothesis by which this expectoration has been explained. *Auctores certant*; and we find ourselves in presence of four opinions, arranged by M. Terrillon in the following order: 1. Perforation by the trocar; 2. Spontaneous perforation; 3. Re-absorption of the liquid remaining after thoracentesis; 4. Transudation of the sero-albuminous liquid through the alveolar walls, in consequence of rapid pulmonary congestion.

M. Féréol attributes the albuminous expectoration to the passage of the pleural liquid by the lung. In order to explain the spontaneous perforation, he imagines a special change, characterized by destruction of the epithelium and the connective tissue of the pleura, a sort of membrane being thus formed, which would allow the filtration of the pleural liquid into the lung, and its ex-

pulsion by the bronchi, without allowing the air to pass. This theory has caused one of the first who denied spontaneous perforation, M. Dujardin-Beaumetz, to remark, "Then let us employ powerful suction, such as that of the aspiratory apparatus." It is as difficult to demonstrate the existence of this perforation without pneumothorax, as it is rare to meet with pleuro-bronchial perforation in the adult. All observers have seen and cited instances of spontaneous pulmonary perforation, without pneumothorax, in purulent pleurisy; but not at all, or very rarely, in serous pleurisy. M. Barthez has demonstrated that in children absence of pneumothorax is the rule.

M. Féréol says that, there having been a preparatory process, ulcerative or otherwise, a fit of coughing comes on, and perforation occurs in the struggle. M. Moutard-Martin asks how this perforation is accomplished; and M. Féréol's answer is, "By a violent effort directed from the bronchial tubes towards the pleura; by a forced distention of the lung, which is no longer supported by a sufficient compression of the effusion; the air then contained in the bronchial tubes would be driven towards the pleura." This perforation, however, should take place at the moment when the vacuum is produced; but albuminous expectoration shows itself at a more or less distant period after the operation. We might further cite, against spontaneous perforation, Boule's case from Béhier's lecture (*Union Médicale*, 175), where the patient underwent four successive thoracenteses, each followed by albuminous expectoration. It is in fact not possible to admit that four spontaneous perforations should have occurred in one subject, or that they should have been found in both lungs, the operation having been performed on both sides. We must therefore give up M. Féréol's very ingenious hypothesis, and the subtle explanations with which he supplements it.—*British Medical Journal*, Oct. 4.

GLEANINGS FROM OUR EXCHANGES.

ANTIPYRETIC TREATMENT IN THE FEBRILE DISEASES OF CHILDREN.—Dr. G. Mayer has treated (*Jahrb. für Kinderheilkunde*, vi. 3, p. 271, 1873) typhus (enteric?) fever, pneumonia, scarlet fever, and erysipelas, occurring in children, by cold baths.

Of enteric fever (?) he treated more than twenty cases; all with a good result. The youngest child so treated was seven months old. The temperature of the water employed was 90° Fahrenheit to begin with, gradually reduced to 80° or even 70°. The duration of the bath was ten to fourteen minutes. An axillary temperature of 103.5°, or a rectum temperature of 103°, was regarded as the indication for a bath.

In catarrhal pneumonia Mayer abstains from baths; the danger to life lying, as he truly says, not in the pyrexia, but in the suffocation. In lobar pneumonia (croupal pneumonia, peripneumonia), on the contrary, antipyretic treatment is very useful. An infant, seventeen months old, was treated in this manner; in eleven days sixty baths, reduced to a temperature of 80° and 75°, were given. Mayer especially recommends cold baths or ice to the head in cases of pneumonia complicated with a convulsive tendency; deeming the convulsions to depend upon the pyrexia.

The results of cold baths in scarlet fever are not so satisfactory, except in the ataxic (or "malignant") form of the disease, which has been treated in this manner, as everybody knows, since the days of Currie (1805).

Quinine he has tried in enteric fever; for a child of six, from seven to twelve grains, in two doses, half an

hour or an hour apart, in the evening. A notable fall of temperature follows. Occasionally vomiting, deafness, and slight increase of diarrhoea ensue.—*London Medical Record*.

INOCULABILITY OF ECTHYMA.—Vidal, one of the physicians to the St. Louis Hospital, Paris, in an interesting paper in the *Annales de Dermatologie et de Syphiligraphie*, No. 5, 1873, gives the result of some experiments with the inoculation of the matter taken from the pustules of ecthyma. Two series of experiments are recorded, one with the pus of ecthymatous pustules developed in the course of grave typhoid fever, the other with the pus of ecthyma simplex. The experiments were conducted with every requisite precaution, and their results may be summed up as follows:

1. The pustules of the ecthyma of typhoid fever and those of ecthyma simplex are auto-inoculable.
2. The pustule of inoculation follows, in the phases of its development, a course identical with that of the original pustule. The first day, several hours after the inoculation, we see at the place of puncture a red point, already a little indurated, and which is usually the seat of considerable itching. The second day the redness extends itself, and an elevated, firm nucleus forms. The third day the redness is greater, the inflammatory indurated nucleus points and forms the base of a little vesicle containing a small quantity of cloudy, serous matter. The fourth day the pustule of ecthyma is perfectly characteristic, fully developed, and furnishes an inoculable pus. It desiccates by the ninth or tenth day, and the crusts fall from the sixteenth to the twentieth day.
3. The liquid taken from the second generation of the pustules is also auto-inoculable.
4. Its activity diminishes in the successive inoculations: the power to reproduce ceases with the third or fourth generation.

ABORTIVE TREATMENT OF BOILS.—The following, applied to boils with a camel-hair pencil or feather, gives great relief in a very short time. The inflamed surface, and a little beyond all around, should be painted with the medicine every fifteen minutes, or as fast as it dries, till a good thick coating covers the part. The throbbing tensive pain and the intense tenderness will be promptly relieved; the redness will subside; the smooth, shining integument will shrink and become wrinkled, and comfort will succeed torment. If the boil is in the first stage, it will disappear without slough. If slough has already formed, it will be quickly separated, and the cure soon complete:

R Tinct. arnicæ, ʒj;
Acidi tannici, ʒss;
Acaciæ pulv., ʒss. M.

It should be used as soon as prepared.—*C. B. Hall, in Cincinnati Lancet and Observer*.

COD-LIVER OIL MIXTURE.—A preparation that has met with much favor, under the above name, has been made by the writer from a formula given him by Mr. Hassard of Philadelphia. It is made as follows: R Fresh eggs, No. iv; lemon-juice, q. s. Place the eggs in a suitable vessel, and pour over them sufficient lemon-juice to cover them, and let the whole remain for twenty-four or forty-eight hours. Then pass the whole through a strainer, and add, with agitation, the following, and in the order given: To the lemon-juice and eggs add an equal volume of honey, cod-liver oil, and brandy or whisky. The whole forms a permanent emulsion, and will keep good during the summer months for a month, and longer in cooler weather. The taste of the oil can be completely covered by the addition of a few drops of oil of wintergreen or oil of bitter

almonds. This mixture is pleasant to take, and a valuable therapeutic agent.

P.S. Glycerin may be substituted for the honey.—*E. S. W.—Cincinnati Lancet and Observer*, Sept. 1873.

PERFORATING ULCER OF THE FOOT.—MM. Duplay and Morat (*Arch. Gén. de Méd.*, March and May, 1873) ascribe perforating ulcer of the foot to a degeneration of the nerves of the part. This degeneration may be of entirely peripheral origin, just as frost-bite induces degeneration of the nerves and a tendency to ulceration; or it may be connected with a more deeply-seated affection of the sciatic nerve, or with disease in the spinal cord. The authors, therefore, place perforating ulcer of the foot in the same category with the ulceration of the cornea which follows section of the trigeminus nerve. The principal symptoms agree with this view, being indicative of disturbance of sensation and nutrition. The inflammation which surrounds the ulceration affects all the tissues, including the arteries, which are sometimes diseased to so great an extent that many have attributed the ulceration to arterial sclerosis. The prognosis will evidently depend on the possibility of treating the nervous disorder with success.

INOCULABILITY OF EPITHELIOMA (*British Medical Journal*, September 20, 1873).—Dr. J. Wickham Legg reports the results of some experiments made upon guinea-pigs and white rats. In the cases of successful inoculation which have been recorded of late years, some hours have usually elapsed between the removal of the epitheliomatous growth from the human patient and its inoculation, thus making it probable that it acted as any other dead mass. In Dr. Legg's experiments the animals were prepared in advance, and not more than sixty or eighty seconds passed between the separation of the tumor and the inoculation of a thin slice taken from its most rapidly growing portion. This was done in five cases; the animals were kept alive for six months and then killed, but there were no discoverable lesions, new growths, or tuberculosis.

CHIONANTHUS VIRGINICA (*New York Medical Review*, September, 1873).—Dr. I. J. M. Soss recommends chionanthus as a potent alternative and cholagogue, and has found it of great value in hypertrophy of the spleen and liver in cases of extreme and persistent jaundice and indigestion. He uses a tincture made from the bark of the root in the proportion of eight ounces to a pint of alcohol.

MISCELLANY.

THE DANGER FROM LIGHTNING.—The Hartford *Courant* has been figuring up the chances of being struck by lightning, and arrives at the following reassuring results: "Taking the figures of the last census report for our facts, we find that during the year 1870 there were, in the whole country, 202 deaths from lightning-stroke. Let womankind take notice that out of these 148 deaths were of males, and only 54 of females. The total number of deaths from all causes was nearly 500,000. There were 2437 deaths from other causes to one death from lightning; and there were 190,883 persons living to every one killed by this cause. It is somewhat singular that the lightning was decidedly more destructive with both males and females between the ages of ten and thirty years than with any others;

between ten and fifteen years is, the most fatal time, but even then the number is very small. Much comfort for those still inclined to be timorous is to be found in going back further on the record. The deaths by lightning in 1870 were only eleven more than in 1860, while the population had increased more than 7,000,000, and the rate is declining, in spite of the hasty conclusions formed by reading the news of a day. In 1860 there were forty-eight deaths by lightning out of every 100,000 deaths from all causes; in 1870 the rate was only forty-two. But now, while only 202 persons died from lightning-stroke in 1870, there were 397 deaths from sunstroke, or nearly twice as many. Yet the number of persons who shudder when they see the sun rise would bear a very small ratio to those who shudder at the rising of the thunder-cloud. The rate of deaths by sunstroke has declined during the decade from ninety-one to eighty-one in 100,000 deaths from all causes, and, with the increase in care and information on the subject, is likely to decrease still more, but it will always probably be largely in excess of the lightning rate. It is also noticeable that there were 1345 deaths by suicide, while there were only 202 deaths by lightning: in other words, an individual is six times as likely to kill himself as lightning is to kill him."

MANUFACTURE OF CARMINE.—This is one of Nature's most gorgeous products in the way of color. That lovely, rich shade of red is solely produced from a decoction of the cochineal-bug. Wherever the cactus is indigenous, there this little insect is to be found in myriads, feeding on the plant and imbuing its own blood with the glorious red of the flower. Only the females are used for making carmine; but, as there are three hundred females to one male, there is not much difficulty in picking out that solitary representative of the ruling sex. Woman's rights have full sway in this particular branch of the insect kingdom. The excellence and purity of this color and vermilions—in fact, of all colors—depend upon careful and thorough washing in water. Some vermilions are washed as often as sixteen times before the pigment is sent to the drying-rooms. In the manufacture of some of the finer colors, too, milk, eggs, or cheese are used with the chemicals as purifiers. The most surprising thing, says a correspondent of the *New York Times*, describing the Plymouth Color Works at Bergen Point, New Jersey, is to see the water that is drawn off from the huge tanks of color after it has been well stirred and washed. The tanks being lined with fine muslin, not a particle of color escapes, and the water is pure and clear as drinking-water. Lakes of different shades are made from carmine combined with a chemical body, which cheapens the color and makes it of any desired hue.—*The Monthly Mirror*.

THE MALADY OF THE FIRST NAPOLEON.—The following interesting letter, along with a lock of hair, has been recently discovered by Major Young, of Lincluden, Scotland. It was written to his father by Dr. Short, principal medical officer at St. Helena at the time of

Napoleon's death: "St. Helena, 7th May, 1821.—You will, no doubt, be much surprised to hear of Bonaparte's death, who expired on the 5th of May, after an illness of some standing. His disease was cancer in the stomach, that must have lasted some years, and been in a state of ulceration some months. I was in consultation and attendance several days, but he would not see strangers. I was officially introduced the moment he died. His face in death was the most beautiful I ever beheld, exhibiting softness and every good expression in the highest degree, and really seemed formed to conquer. The following day I superintended the dissection of his body (at this time his countenance was much altered), which was done at his own request, to ascertain the exact seat of the disease (which he imagined to be where it was afterwards discovered to be), with the view of benefiting his son, who might inherit it. During the whole of his illness he never complained, and kept his character to the last. The disease being hereditary, his father having died of it, and his sister, the Princess Borghese, being supposed to have it, proves to the world that climate and mode of life had no hand in it; and, contrary to the assertions of Messrs. O'Meara and Stobo, his liver was perfectly sound; and had he been on the throne of France, instead of an inhabitant of St. Helena, he would equally have suffered, as no earthly power could cure the disease when formed."—*British Medical Journal*.

GARMENTS MADE WATERPROOF.—A writer in an English paper says, "By the way, speaking of water-proofs, I think I can give travellers a valuable hint or two. For many years I have worn india-rubber water-proofs, but will buy no more, for I have learned that good Scotch tweed can be made entirely impervious to rain; and, moreover, I have learned how to make it so; and, for the benefit of your readers, I will give the recipe: In a bucket of water put half a pound of sugar of lead and half a pound of powdered alum; stir this at intervals, until it becomes clear; pour it off into another bucket, and put the garment therein, and let it be in for twenty-four hours, and then hang it up to dry, without wringing it. Two of my party, a lady and gentleman, have worn garments thus treated in the wildest storms of wind and rain, without getting wet. The rain hangs upon the cloth in globules. In short, they are really waterproof. The gentleman, a fortnight ago, walked nine miles in a storm of rain and wind such as you seldom see in the South; and when he slipped off his overcoat his underwear was as dry as when he put them on."—*The Monthly Mirror*.

EIGHTEEN Norwegians, separated in September, 1872, from their ship on the northern shores of Spitzbergen, were forced to winter at a place on the shore called Mitterbuk, where they were all found, a few weeks ago, dead, by Captain Mack, who was sent in quest of them. They had no lack of food, of a kind, as biscuit was found beside them; but they wanted vegetables, and, scurvy setting in, they languidly crowded over the fire, and so died one by one. Want of provisions might

have proved their salvation; for men cast ashore at Spitzbergen immediately set about scraping antiscorbutics from under the snow, and keep up the circulation in hunting wild animals, whose warm blood when drunk also prevents scurvy, and whose furs supply clothing. Six Dutchmen, a good many years ago, wintered at Spitzbergen in this way, and survived. They were wiser in their generation, however, than the unfortunate Norwegians, who perished (as did also a second crew from Holland, who wintered there before them) by neglecting the pursuit of wild beasts and antiscorbutics, and shivering before the fire in their hut.—*The Canada Medical Times*.

M. B. A. OF FRANCE.—The *Medical Benevolent Association of France* held its fourteenth annual meeting April 20 and 21. Its finances are highly prosperous, the society having funded 335,046 francs. The proposition was made by the treasurer to begin granting annuities in 1874, that is, four years sooner than originally intended.—*Western Lancet*.

FEMALE DENTISTS.—In a short time, says the *Vienna Medical Press*, Fräulein Föckling, D.D.S., a young lady of Berlin nativity, will establish herself in Berlin in the practice of her profession. Miss Föckling graduated in Baltimore, March 1, and remains at present in the office of a celebrated dentist of that city, to perfect herself in practical dentistry. The *Allg. Mediz. Centralblatt*, which communicates this interesting intelligence, reports further that the young lady prosecuted her studies with the greatest zeal and with remarkable success. As she ascended the platform, March 1, attired in a most elegant robe *en train*, and received her diploma from the Dean of the College, she was overwhelmed with applause and bouquets of flowers.

PROFESSOR ROKITANSKY.—This distinguished ornament of the Vienna Medical School has announced to the Professoren-Collegium that next year he will have attained his seventieth year. According to the regulations, he should then retire from his professorship and be placed on the pension-list. It seems, however, that, seeing the great loss his retiring would inflict upon the Vienna School, of which he may almost be considered the founder, an effort will be made to have his case regarded as an exceptional one, as long as his present good health and teaching power continue.—*Boston Medical and Surgical Journal*.

UNFORTUNATE CASE OF SNEEZING.—In a letter Dr. Y. A. Winn says, "I will mention a very singular case, —singular to me at least. A gentleman informs me that when prompted to sexual commerce he is seized, immediately prior to the act, with a fit of violent sneezing: not unfrequently even the *thought* of coition produces this effect. The gentleman being married, we are at a loss for a satisfactory remedy. Fortunately, his wife has never *apparently* noticed this peculiarity. If she should, and he did much sneezing in the presence of other ladies, even *sneezing* might be a sufficient ground for divorce."—*Western Lancet*.

NATURAL RED SILK.—M. Ruimet des Taillis, writing in the *Chronique de la Société d'Acclimatation*, states that by feeding silkworms on vine-leaves he has obtained cocoons of a magnificent red, and, by employing lettuce, others of a deep emerald-green. M. Delidon de Saint-Gilles, of Vendée, has obtained silk of a beautiful yellow, other samples of a fine green, and others again of a violet, by feeding the silkworms on lettuce or on white nettle. He points out that the silkworms must be fed on mulberry-leaves when young, and supplied with the vine-, lettuce-, or nettle-leaves during the last twenty days of the larva-stage of their life.—*Druggists' Circular*.

EVERY physician in regular practice, in city and country, should not only take one or more medical journals, but contribute as well. A large and lucrative practice, a high and influential position, are not alone sufficient to perpetuate a worthy name and reputation. These are perishable and will die out, when well-timed and well-recorded facts will last and establish true and genuine worth. Zimmermann remarked "*that the greatest medical writers of any age were the best physicians.*" Those who communicate their views should rather be encouraged than decried.—*President's Address, Canada Medical Association*.

CHEERFUL.—In the province of Quebec, lunatics are generally sent to jail and kept there till they become permanently insane and hopeless, when they are sent to the asylum to become permanent burdens on the province.—*The Canada Medical Record*.

BURNING OF THE DEAD.—A society has recently been formed at Zurich, Switzerland, the members of which pledge themselves to have their bodies burned after death, in place of the usual burial. The society already has a large number of adherents.

PRURITUS VULVÆ.—Take of bichloride of mercury, one part; alum, twenty parts; starch, one hundred parts; water, twenty-five hundred parts. Mix. Apply freely to the part.—*Revue de Thérap.*

THE brain is a splendid piece of tapestry, of which the Creator has furnished the canvas and we have filled in the stitches.—*Fournier*.

THE locusts have done so much damage in Nepaul, India, during the past season, that a famine is imminent.

NUMEROUS cases of enteric fever have occurred in the Rhymney valley, South Wales.

OFFICIAL LIST

OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U.S. ARMY, FROM OCTOBER 14, 1873, TO OCTOBER 20, 1873, INCLUSIVE.

GHISELIN, J. T., SURGEON.—Relieved from duty in Department of the Columbia, and ordered to Department of Texas. S. O. 206, A. G. O., October 15, 1873.

HUBBARD, VAN BUREN, ASSISTANT-SURGEON.—Granted leave of absence for thirty days. S. O. 162, Department of the Gulf, October 11, 1873.

KIMBALL, J. P., ASSISTANT-SURGEON.—Granted leave of absence for thirty days. S. O. 224, Department of Dakota, October 9, 1873.

SATURDAY, NOVEMBER 1, 1873.

ORIGINAL COMMUNICATIONS.

CASE OF ECLAMPSIA IN A NEW-BORN INFANT.

BY ELLWOOD WILSON, M.D.

THE following case is of some interest as illustrating one of the rarer unavoidable evils following the use of the forceps in prolonged and difficult labors.

Second pregnancy; head-presentation, fourth position (vertex to right sacro-iliac symphysis). Ether administered to modify the intensity of the pains, but not beyond slight muscular relaxation. The forceps were applied *without difficulty* to the sides of the child's head, and traction made with each returning pain during a period of three hours, until delivery was effected, the grasp of the instrument being relaxed during the intervals between the pains. The labor was rendered difficult by narrowing of the pelvic outlet; its whole duration was thirty-two hours. The child, a male, and of large size, seemed feeble when born, but reacted pretty well. It was greased and wiped, washing being interdicted, and simply wrapped in a blanket, kept upon its right side, ten drops of brandy being given every two hours in milk and water, equal parts. The head was moulded by pressure, and slightly marked by the blades of the forceps. Twenty-four hours after birth it seemed stronger, and permission was given the nurse to wash and dress it. Some exhaustion followed, and in a short time two convulsions occurred in quick succession, and, after an interval of nearly an hour, a third during my visit. The muscles of the respiratory tract were chiefly affected. The child suddenly ceased breathing; its surface became livid, its extremities cold. At first the heart's action was not altered, but during the continuance of the fit the pulse gradually failed, until at length it was scarcely perceptible. The thumbs were drawn slightly inward; there was no general muscular rigidity, no twitching of the face or extremities; the muscles of the eyes were not affected. This convulsion lasted two minutes, and terminated with a long, deep inspiration, followed by a fit of crying, immediately upon the introduction of a small conical lump of ice into the rectum. Convulsions recurred at intervals of from fifteen to forty minutes during fifteen hours, but the use of the ice, whether at once at the beginning of the seizure or after waiting until it had lasted some moments, was invariably followed almost immediately by the long inspiration and fit of crying,—the relief of the paroxysm. Every effort at deglutition caused a return: the treatment was therefore administered by enema. It consisted of five grains of bromide of potassium every two hours, alternating with fifteen drops of brandy in milk. The child was kept strictly upon its right side, and surrounded with artificial warmth. The attacks gradually decreased both in intensity and frequency, and finally ceased. Stimulus and small doses of the bromide were continued for several days. More than three months have since elapsed without the recurrence of a symptom referable to the nervous system. The child is well nourished, and apparently in perfect health. The contraction of the outlet of the pelvis in the mother of this child is very marked. Her first child was born after a difficult labor of thirty-six hours, but so enfeebled that it died in a short time.

I have given the history of this case at some length,

in order to point out what I believe to be the cause of the convulsions: that is, the prolonged pressure of the ends of the forceps-blades at the base of the cranium, producing some slight derangement of relations of the structures of the brain at its base, and consequent *tendency* to convulsions. This tendency—not strong enough to overthrow the equilibrium of the nervous system as long as the child's general strength did not fall below a certain condition—developed into convulsions as soon as it was reduced by the insignificant shock of the bath and exhaustion of dressing, to which children, as a rule, may be exposed with impunity on the second day.

Mere moulding of the head by pressure of the bony walls of the pelvic canal—a pressure exerted upon the cranium at its greater diameters, and not upon the base—has not, in my experience, given rise to convulsions. W. J. Little, however (see Transactions of the London Obstetrical Society, vol. iii. p. 293), remarks that convulsions are very apt to occur immediately upon or at varying periods after difficult births, and attributes this symptom of disorder of the nervous system in the great majority of cases to the congestions resulting from partial asphyxia, rather than to mechanical injury of the nervous structures. But he quotes North as saying, "It cannot be doubted that convulsions occasionally arise from excessive and long-continued pressure of the head during protracted labor." Cazeaux fails to enumerate convulsions among the accidents following the use of the forceps. Spastic rigidity is apt to occur subsequently.

The forceps used were the short forceps of Davis, and there was no difficulty in locking the blades; although there is no doubt that the change in the shape in the head through long compression, increasing the occipito-mental diameter, interfered with the coincidence of the curvature of the forceps with that of the head, and in so doing brought the ends of the blades to press more directly upon the cranial base. Graily Hewitt in 1861 called attention to the fact that this change in the shape of the head renders the application of the forceps difficult, and suggested in such cases the use of a longer blade with a less decided curve.

Ether, which always when freely used and long continued enfeebles the child, and the unguarded use of which is without doubt in the present era of obstetrics the cause of multitudes of still-births, does not cause convulsions.

The treatment of the paroxysm by ice to the anal region, or by small pieces of ice introduced into the bowel, was attended by the most marked results. More than once the convulsion, unusually prolonged, seemed to be passing into coma, when the ice quickly brought it to an end.

Certainly in this case the feebleness of the child, and the fact that it was but a day old, forbade the use of most of the means recommended for the relief of the convulsive paroxysm, while the severe type of the convulsions and the imminent danger of death precluded the use of others less speedy in their action. By the application of ice to a part so largely supplied with nerves, a sudden powerful

impression was produced upon the spinal system, and that by a remedy at once near at hand, entirely controllable, and incapable of producing depressing or traumatic secondary effects.

DILATATION OF THE FEMALE URETHRA.

BY OSCAR H. ALLIS, M.D.,

One of the Surgeons to the Presbyterian Hospital.

I REPORT the following cases, not that they present any new feature, but rather as confirmatory of cases previously favorably commented upon by other writers.

Case I.—Mrs. —, 58 years of age; vesical calculus; had often passed concretions during micturition, and some of large size. I visited the patient every day or every second day for about two weeks, and at each visit effected a greater dilatation of the urethra. As soon as I could introduce the forefinger, Dr. Turnbull, who had placed the case in my hands, and Dr. Curtin, assisted me in completing the dilatation and the extraction. There proved to be two large calculi, and the circumference of the larger, when grasped with the ordinary lithotomy forceps, was three inches and a half. At the suggestion of Dr. Turnbull, the bladder was injected with cold water, to check any bleeding that might ensue had the walls of the bladder been injured, and, to the surprise of all present, not a drop was permitted to pass the already contracted sphincter. The patient made a rapid recovery, without suffering a moment's incontinence of urine.

Case II.—Mrs. —, æt. 53; married; the mother of three children. In the spring of 1872 she began to complain of pain in the hypogastrium. The pain was neuralgic in character, not constant, and aggravated under certain changes of the weather.

The slightest distention of the bladder gave her pain, and the sudden stoppage of the urine during micturition led to the suspicion that calculus might be present. Still, the explorations of the bladder with the sound, and examination of the urine, gave no satisfactory clue to the malady. Baffled in every attempt to give relief, Dr. Groom, of Bristol, in whose care the patient was, requested me to dilate the urethra and make a digital examination. This was effected in about fifteen minutes under ether, and a polypus was found at the base of the bladder, attached to a roughened thickened portion of the bladder at a point corresponding to the right side of the pubes. The diagnosis was thus established, the difficulty removed, and with the happiest results, and, what especially concerns us now, no incontinence of urine.

The mode of dilatation will be noticed in each case. In the first it was prolonged and vexatious to both patient and physician. In the second it was rapid; yet in the first the dilatation may as justly be called *rapid*,* for when I went to the patient the urethra would only admit the finger, and in about fifteen minutes it had been dilated to a circumference of three inches and a half.

I can see nothing to favor gradual dilatation, whether the object be to explore the bladder with the finger or to extract foreign bodies from it. The female urethra is under all circumstances very dilatable. There are many well-authenticated cases of

large calculi having escaped with the urine from the bladder, and a case is reported of obstructed vagina in which coitus took place habitually through the urethra.

During the latter stages of dilatation the progress must be gradual, for the limit of distensibility is being reached, beyond which rupture of the fibres must take place.

The instrument used—and a most admirable one for the purpose—is depicted in Gross's Surgery, under "Dilatation of the Female Urethra."

NOTES OF HOSPITAL PRACTICE.

JEFFERSON MEDICAL COLLEGE.

CLINIC OF PROF. S. D. GROSS, M.D.

Reported by J. B. ROBERTS.

REDUCTION OF AN AXILLARY DISLOCATION OF THE HUMERUS OCCURRING DURING PUERPERAL CONVULSIONS.

MRS. D., aged 20, was seized during parturition with puerperal eclampsia, in which the convulsions were so violent that she sustained from muscular contraction an axillary dislocation of the right humerus.

The great variety of motion allowed the arm necessitates a peculiar mechanism of the shoulder-joint, which renders it especially subject to dislocations; and we accordingly find that of all luxations in the body that of the head of the humerus is the most frequent.

The head of the bone may be thrown into the axilla, upon the ribs below the clavicle, or backwards upon the dorsum of the scapula, constituting respectively the axillary, thoracic, and sub-spinous forms of the dislocation. The thoracic and sub-spinous varieties are very rarely seen, but that into the axilla is of frequent occurrence, generally, however, being produced by direct violence, and but seldom by muscular contraction. The injury as a result of puerperal convulsions is very uncommon, though instances of dislocation by muscular contraction during epileptic seizures are met with not unfrequently.

In the patient the contour of the shoulder is decidedly changed by a marked flattening where the roundness of the deltoid should be, and an unnatural prominence of the acromion, under which there is a hollow, caused by the removal of the head of the bone from its normal position. The distance from the top of the shoulder to the axilla is materially increased, differing from the uninjured side by at least an inch; the arm is lengthened; upon rotation of the limb the head of the humerus can be distinctly felt in the axillary space; and the elbow is thrown out from the body by the tension of the deltoid muscle.

It has been stated by some surgeons that in axillary dislocation of the humerus the patient cannot bring the elbow in front of the body, so as to grasp the opposite shoulder with the hand; but although this is true in this instance, it was not in the case brought to the clinic two weeks ago, where the patient could place her right hand on the left shoulder without any difficulty whatsoever.

In injuries about the shoulder-joint a careful examination is always imperatively demanded; for, though the symptoms of dislocation are generally characteristic, yet there are obscure cases which the surgeon may fail to recognize, unless the investigation be thorough and complete.

* I use the term *rapid* as implying that the dilatation has all been accomplished at a single visit, and not with reference to the number of minutes necessary to accomplish it.

When the dislocation is of recent date, reduction can be readily effected; but when left until a considerable period of time has elapsed, the operation is generally unsuccessful, and frequently attended with great danger to the important vascular and nervous structures in the axilla.

As the luxation in this instance occurred only three weeks ago, I shall endeavor to reduce it by using my heel as a fulcrum in the armpit and making extension on the forearm with both hands. The patient is thoroughly anæsthetized, in order to relax the muscular system, and then, having put a folded towel in the axilla, I place my heel, divested of the boot, against the luxated bone, making at the same time strong extension at the wrist, and by this means cause the head of the bone to slip into the glenoid cavity with a snap.

If this had been an old dislocation, it could not have been reduced by this simple manœuvre, but would have required the application of a much greater amount of force, which even then might have proved ineffectual, or have been followed by such disastrous consequences as rupture of the axillary artery or vein.

The period after which the surgeon should refrain from undertaking reduction cannot be fixed absolutely. It depends upon the amount of plastic inflammation that has occurred, and upon the degree of motion of the joint, which, if considerable, may be assumed as evidence that a false socket has been formed, and that attempts at reduction will be useless.

After reduction it is important to keep the arm supported in a sling, and to prohibit extensive motion in any direction, lest there be a recurrence of the displacement. The subsequent inflammation must be combated upon general principles, and the occurrence of ankylosis prevented by passive motion.

STRICTURE OF THE ŒSOPHAGUS FROM SWALLOWING LYE.

Mary H., aged 2 years, drank about three months ago some of the "concentrated lye" of the shops, which by the resulting inflammation has produced organic stricture of the œsophagus.

The powerful alkali, having corroded the mucous membrane of the lips, tongue, and throat, set up an intense inflammation, during the progress of which the destroyed tissue came away in large patches, and the patient was unable to swallow any solid food. After the expiration of six weeks the inflammatory action subsided sufficiently to permit the deglutition of bread; but a short time subsequently this became again impossible, so that at present nothing but liquids can pass into the stomach; and even these are at times ejected by regurgitation.

One of the most frequent causes of organic strictures of the œsophagus is inflammation arising from the action of acids or alkalies that have been inadvertently swallowed, which even when not very concentrated are capable of producing a degree of inflammation sufficient to cause contraction of the calibre of the tube.

The most frequent position of the constriction is opposite the cricoid cartilage, for in that situation the œsophagus has normally the smallest diameter. Just above the stricture there is usually a dilatation of the tube, the result of pressure exerted by the food arrested in its downward course by the obstacle.

Here is a specimen, for which I am indebted to Dr. Barton, my chief assistant, taken from a child who died with a stricture of the gullet. The constriction is several inches long, and entirely impervious, so that the patient perished from inanition, as no food passed into the stomach for some time previous to death.

The only available treatment in stricture of the œsophagus is long-continued dilatation with the bougie; but in this case, since it is impossible to have the co-opera-

tion of the patient, it is not judicious to endeavor to carry out this plan. The administration of chloroform at every introduction of the instrument would be impracticable; and, unless completely anæsthetized, the child might by struggling cause the operator to rupture the already diseased tube. Palliative measures must therefore be adopted, and the patient's strength kept up by nutritious liquid food, for it is probable that the child does not obtain sufficient nourishment through the narrowed œsophagus to meet the requirements of the system.

ONYXITIS OF THE INDEX FINGER.

The left index finger of this girl has been sore for two months, being now indurated and enlarged and having a curious bulbous appearance. The trouble began with a small ulceration at the root of the nail, which, gradually increasing in extent, ran around the circumference of the nail, and entirely destroyed it. There is now no nail upon the finger, but in its place a foul, unhealthy-looking ulcer, which gives the girl, particularly during the night, a great deal of pain.

The patient thinks the disease was brought on by a slight injury which the finger sustained a short time previous to the appearance of the ulcer. This is quite probable, as onyxitis, or onychia maligna, as some designate the affection, has not unfrequently some external violence for its immediate exciting cause, though it is in reality a manifestation of constitutional taint, being almost invariably dependent on hereditary syphilis.

In treating onyxitis the bowels should be kept well opened, and mercury administered until the occurrence of slight ptyalism shows that the system has been brought under its influence. As it is often well to employ the iodide of potassium, sodium, or ammonium, in combination with the mercurial, this little girl shall take three times a day one grain and a half of the iodide of sodium, which is less nauseating than iodide of potassium, with one-twentieth of a grain of the corrosive chloride of mercury. In addition to this constitutional treatment, she shall use emollient poultices and sugar of lead locally.

Depletion of the parts by scarification or by means of Swedish leeches would no doubt be attended with very beneficial results; and it is possible that this may be resorted to hereafter in conjunction with the foregoing treatment.

ST. MARY'S HOSPITAL.

SERVICE OF JAMES CUMMISKEY, M.D.

Reported by JAMES A. MEARN, M.D.

ABSCESS OF THE LIVER.

ROLAND J., æt. 44, married man, proprietor of a liquor-house in this city, was admitted to the medical wards August 29. His condition on admission was as follows:

Patient was suffering from a high fever, frequent pulse, intense headache; very restless and irritable (had had a severe chill the day previous); complained of pain in right side on inspiration; breathing interrupted, tongue heavily coated, bowels costive; had slight hacking cough, but no expectoration. On inspection, the right side was bulging slightly. On percussion, dulness of base of right lung, and area of dulness of liver enlarged.

Diagnosis at this time was pleurisy. He was treated by blisters over seat of pain; a fever mixture was given; bowels opened by saline purgatives. In two weeks he was able to walk around the wards, and a few days afterwards went home for a day. He came back, and was apparently convalescent.

On the 21st of September he went down to service in

the chapel; the room was cold and damp; after going up-stairs he was seized with a chill, and had to go to bed. This time no symptoms indicating a return of the pleurisy were discovered, but each day the swelling in the right hypochondriac region increased. The liver became enormously enlarged. Dulness as high as upper margin of fourth rib, and extending three inches below margin of the ribs. The patient emaciated rapidly; had slight diarrhoea; appetite very bad; tongue became heavily coated; breath offensive; skin slightly jaundiced; pulse frequent, and scarcely perceptible. He was given blue mass ten grains daily, with nitromuriatic acid, diluted, fifteen drops every four hours, for five days. At this time he was given stimulants alone, and poultices applied over the swelling. This was continued for nine days. Fluctuation was perceptible. An exploring-needle was introduced, which contained pus on withdrawing it. The following morning the swelling had almost entirely disappeared. He was passing pus by the bowels. He became delirious, and died in twenty-eight hours.

Post-mortem examination revealed the following condition. A cavity occupying nearly the whole of the right lobe, ulceration through into the duodenum, and also into the peritoneal cavity. Over two quarts of pus were found in the liver and abdominal cavity. Adhesions had formed to the parietes opposite the fifth, sixth, and seventh ribs. The left lobe was somewhat enlarged and softened.

TRANSLATIONS.

ON THE OLEO-STEARATES, AND PARTICULARLY ON THE OLEO-STEARATE OF ZINC.

Translated from the *Bulletin Générale de Thérapie*, Sept. 1873,

BY ARTHUR VAN HARLINGEN, M.D.

WE desire to call the attention of practitioners to the advantages which these compounds present, both as entering into particular pharmaceutical preparations, and as to the therapeutic results which may be hoped for from their use.

Oleo-stearates (or rather oleo-stearo-margarates) are salts which have as bases oxides of the various metals, and as acids the oleic, stearic, and even margaric; and which are extracted from fatty substances by saponification.

Two processes may be employed for the preparation of these salts: one, which is direct, consists in mingling in presence of a certain quantity of water the different oxides which it is desired to combine, and the acids, or rather the natural fatty substances which are found in combination with glycerin under the names of oleine, stearine, and margarine. In this process the action of heat is often necessary, in order that the combination may be more easily effected.

This method is similar to that by which almond soap (oleate of soda), white soap, and lead plaster (oleo-stearo-margarate of lead) are prepared.

In other cases, and particularly where the oxide which is to enter into combination is very slightly alkaline, or of feeble solubility in water, and where, on the other hand, the oleo-stearate is insoluble in the same vehicle, it is necessary to have recourse to a second process, which permits of obtaining the salt indirectly and by double decomposition.

It is by this process that the oleo-stearates of iron, copper, mercury, etc., and of the various alkaloids, are obtained.

For this purpose a solution of almond soap is added in small portions to a solution of some soluble salt, with the base of which it is desired to obtain an oleo-stearate, until a precipitate is formed. Care must be taken always to employ an excess of the solution of soap, the presence of which excess is recognized by the milky tint of the supernatant fluid, the latter being clearly separated from the precipitated oleo-stearate.

That metallic salt should be chosen which precipitates most easily: thus, for iron or copper the sulphate, for mercury the per-nitrate, should be used; avoiding in the latter an excess of nitric acid, which possesses the property of decomposing the alkaline soap and setting free the fatty acids.

For the oleo-stearates of the alkaloids as proposed by M. Tripier, the chlorides of morphia, quinia, etc., are used.

The salts, as we have said, offer as pharmaceutical preparations several advantages, which have been pointed out by various writers, particularly M. Jeannel.

They allow, by their easy solubility in fatty substances, the preparation of ferruginous oils, and pomades containing active principles (oleo-stearates of morphia, quinia, etc.), where the state of solution in the excipient in which they exist makes them preferable to similar preparations where the active principles are incorporated by simply mixing or are dissolved in water, and are perhaps much less easy of absorption.

Finally, the oleo-stearates lend themselves successfully to various therapeutical applications. To give a single example, we may cite the oleo-stearate of zinc, which, mingled with a convenient quantity of an unctuous excipient, as in the following formula, gives excellent results in the treatment of chronic eczema accompanied by itching:

R Oleo-stearate of zinc (dry), 3 parts;
Mutton-suet, 15 parts;
Oil of sweet almonds, 15 parts.

Slowly incorporate the oleo-stearate of zinc with one part of the oil of almonds in a slightly warmed porcelain mortar, and add, little by little, the melted and partially cooled mixture of the remainder of the oil with the suet.

EPISTAXIS FROM A LEECH IN THE NOSE.—Dr. Amaducci was called to a boy aged 6 years, who had had obstinate epistaxis for a week, for which no cause could at first be assigned; the boy was healthy, and there was no family history of hemorrhagic diathesis. On being questioned, he said that the hemorrhage commenced some hours after he had drunk water from a brook. Cold water was injected into the right nostril, and the coagula were removed; a leech was then discovered adhering to the mucous membrane, and was removed by polypus-forceps. After this, the epistaxis ceased entirely. Dr. Amaducci believes that the leech was first taken into the mouth, and that it thence crawled into the nostril.—*Il Raccoglitore Medico*, No. 25, 1873; and *Allgemeine Medicin. Central-Zeitung*, Aug. 13.

TREATMENT OF ASTHMA.—Dr. Ad. d'Evot (*Rev. de Thérap.*) gives some directions as to the remedies to be used in asthma. Twelve grammes of flowers of sulphur, with one gramme of tartarized antimony, are mixed with honey and powdered gum and divided into sixty pills. Three of these represent the dose of Debreyne's powders, and one pill is given morning and evening.

Morning and evening a sheet of nitre paper may be burned in the bedroom or alcove of the patient. The paper may be prepared of white filter-paper, dipped in a solution of nitrate in the proportion of a drachm to an ounce.—*The Doctor*.

PHILADELPHIA MEDICAL TIMES.

A WEEKLY JOURNAL OF

MEDICAL AND SURGICAL SCIENCE.

The Philadelphia Medical Times is an independent journal, devoted to no ends or interests whatever but those common to all who cultivate the science of medicine. Its columns are open to all those who wish to express their views on any subject coming within its legitimate sphere.

We invite contributions, reports of cases, notes and queries, medical news, and whatever may tend to increase the value of our pages.

All communications must bear the name of the sender (whether the name is to be published or not), and should be addressed to Editor Philadelphia Medical Times, care of the Publishers.

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EDITORIAL.

ORAL SURGERY.

IN the *Dental Cosmos* for October is a very able editorial from the pen of Dr. James W. White, in answer to the question of the London *Lancet*, What is Oral Surgery? From it we extract the following, since it seems to us to contain as forcible an argument as can be made in favor of "Oral Surgery:—"

"An oral surgeon is one who, having received a general medical and surgical education, is drawn by interest or inclination to the special study and treatment of all abnormal conditions of the mouth, as are others to certain lines of practice now long enough established to have recognition as specialties. Just where such special practice shall begin, what it shall include, and where it will find its limitations, will depend, as in the practice of every other specialty, on the inclination and capabilities of the practitioner.

"If, as suggested by the London *Lancet*, it finds its boundary in 'stopping and extracting teeth,'—limited to a routine of mere mechanical manipulation,—the attempt to appropriate on such a basis of work or merit the honors of a learned profession is simply to court ridicule; while, on the other hand, to attempt to be an oral surgeon without the foundation of a medical education is neither more nor less than quackery. The *Lancet*, familiar apparently with only that class of dentists who are known among us as 'tooth-carpenters,' is astonished when a dentist aspires to do anything higher than 'to stop and to extract teeth.' Query: Is London dentistry not yet beyond the days of Paré? But, though unknown to the *Lancet*, there are in England, as well

as in this country, those in the dental profession not unknown to fame,—men who have earned, by study and practice, the title of oral surgeon; whose experience and proficiency in the treatment—medical, surgical, artistic, and mechanical—of all lesions of the oral cavity entitle them to a name indicative of special knowledge and skill equally with those to whom are freely accorded the titles of aural or ophthalmic surgeons.

"To deny recognition of the force which is developed by concentration is simply absurd. It then only remains to inquire if the lesions of the mouth are sufficiently serious and of such special character as to justify devotion to their study and treatment as a special branch of medical practice. No surgeon, we think, will deny that they are among the most serious and fatal of the lesions of the body, and that their treatment demands a degree of knowledge and skill which renders this department the most difficult in the range of a general surgical practice. A vast amount of suffering and disfigurement, and deaths not a few, are fairly chargeable to the malpractice, or want of practice, of those who, however learned or skilful in other directions, are incompetent to treat dental and associative lesions, because of having made no special study of the subject.

"That the majority of those now practising dentistry are worthy, in any wide sense, of the title of oral surgeons is not claimed. Too many, it may be, are quite satisfied 'to stop and to extract teeth;' but in the ranks of the profession are men whose ambition has a wider range, and who are acquiring a legitimate reputation in the medical profession as specialists.

"That the profession, now considered by the *Lancet* as devoted to a strictly mechanical pursuit, is to mean, in the near future, vastly more than this, we firmly believe. Let the young men now entering the ranks understand that the dentist is soon to be assigned his true position, either as a mechanic or a specialist in medicine. There cannot much longer be any middle ground. He is to blush when called doctor, or is to feel himself qualified to perform a doctor's duties."

In the address to the Canadian Medical Association, given at their late meeting by their president, the other side of this discussion is earnestly upheld; and the force and humor of the following extract are such that no apology is needed for its introduction here:

"Oral surgery carries the science from the top of the mouth above, past, and including, all the teeth, incisors, canines, bicusps, and molars; past the uvula, past the fauces and anterior palatine arch; past the right, ay, and the left tonsil; past the posterior palatine arch to the epiglottis, catching up in its way the apertures of the various salivary ducts, and there leaves it. But it cannot, in this age of unrest, stop there. There is room and capitals to furnish titles to the laryngeal, the tracheal, the clavicular, the sternal, the costal, the intercostal, the axillary surgeon, the humeral, the pa-

rietal, the genital, the inguinal, the femoral, the popliteal, the pedal, the phalangeal surgeon; but here, again, we encroach on the *terrain* of the comfort-giving corn-doctor, the chiropodist, to whom I would suggest the appropriation of the title of D.C.S., Doctor of Chiropedal Surgery! And why not? A toe is as good as a tooth, and there are fewer of them."

We believe specialism in medicine to be a necessary outgrowth of the extension of our science and art; but, of course, there is a possibility of carrying it too far,—of dividing up too finely,—of pulverizing into dust instead of breaking into large fragments fitting into one another and capable of being joined together into a united whole. The question then is, Is oral surgery sufficiently distinct and of sufficient magnitude to be worthy of rank as a specialty?

In considering this, it seems to us of vital importance that we recognize the true position of *dentistry* and of *dentists*.

Argue and reason as we will, laud dentistry to the skies, or degrade it to lowest rank, the fact remains, that the great bulk of the work to be done is purely mechanical; that whilst a few practitioners, like our friend Dr. Garretson, may climb from tooth-plugging and tooth-pulling to the performance of the most serious operations, involving life itself,—from being skilful dentists to being as skilful surgeons,—the great bulk of the profession must spend their lives in a monotonous round of purely mechanical labor, labor in which mechanical and artistic skill along with personal qualities are the sole guarantees of success.

The higher education, the wider culture of the physician, though it may contribute, is in no sense a necessity, to such success; and just so long as this is true, so long will a very large proportion of dentists neglect that culture which, whilst it may be an ornament, is not a necessity for the practice of their profession. Here, it seems to us, the matter rests. Dentists—we mean the general mass—have at present no claims to be recognized as representatives of a branch of our profession; many dentists are doctors, some of them are "oral surgeons," and as such we receive them into the brotherhood; but the great mass must probably always remain as they are at present,—*dentists*,—worthy citizens,—we do them no disrespect,—artists of ability, many of them,—but yet in no sense practitioners of medicine, in no sense entitled to recognition as such.

The professions of dentistry and of medicine conjoined in one person, but they are essentially distinct, and a man may assuredly be an

excellent dentist without being a doctor, or an excellent doctor without being a dentist.

In truth, we can see no necessity for "oral surgery" being a specialty. Is cancer of the jaw different from cancer of the rib, or any more different from cancer of the rib than the latter is from cancer of the vertebra or cancer of the tibia? Is every bone to have its specialist? In such a specialty as the eye, profound study of sciences and the use of instruments not employed by the general surgeon are necessary; but not so with "oral surgery."

Further, we see no reason for believing that a man can take out a jaw-bone or diagnose an epulis any better for knowing how to plug a difficult molar or to counterfeit with consummate skill a lost incisor.

Far better preparation for such work, it seems to us, is long-continued daily practice in resecting other than jaw bones, and in diagnosing tumors in other parts of the body than the face,—practice to be obtained only in the wards of the general hospital and the office of the general surgeon, not at all in the usual work of the dentist.

Finally, oral surgery has no natural boundaries,—no Rhine or Pyrenees which shall limit it. This very day, chancing to be at the clinic of the great apostle of oral surgery already alluded to, we saw present three cases, the first of which was an erectile tumor of the vertex, the second an occipital tumor, believed to communicate with the brain and to be arachnoidal. We can conceive of the oral surgeon crawling downwards to the anus; but how arachnoidal tumors and cephalic varices are connected with the mouth passes our comprehension.

We would like to see dental schools attached to our medical colleges, and opportunity afforded to our medical students to learn something of diseases of the teeth, or even, if they like, to become practical dentists. We believe that in many parts of our country the practice of dentistry would afford training in the use of the fingers, occupation and honorable support to young, unemployed, almost starving, surgeons, and, at the same time, open the paths to the higher fields of their life-work.

In very many of our country towns and villages even respectable dentistry is a lost art, or rather an art that has never been found. A very few months' instruction would enable any young physician of a mechanical turn of mind to extract teeth and to plug, under ordinary circumstances, with credit to himself. The work of two or three hours would give him at least a bare livelihood, and at the same time offer excellent opportunities for gaining the confidence of his neighbors.

This is no mere fancy sketch: we have known

the door to high success as a practitioner of medicine opened in this way.

ILLEGAL PRACTICE OF MEDICINE IN CONSTANTINOPLE.

A WRITER in a late number of the *Gazette Médicale d'Orient* calls attention to the prevalence of the illegal practice of medicine in Constantinople, and alludes to its legitimate effect as seen in a case which had lately created some stir in that city.

A young gentleman, feeling unwell one day, applied to a certain apothecary for relief. That worthy diagnosticated "worms," and put up a package of powders, which, he assured his victim, would kill the troublesome parasites.

The desired relief came, but in an unexpected form. After taking the first powder the patient fell into convulsions with tetanic spasms, and shortly died.

At the subsequent examination by the legal authorities it appeared that the apothecary had either given strychnia in mistake for santonin, or, what seemed more probable, had by some strange blunder made his powders from the receptacle containing strychnia, instead of from that in which white sugar was kept, the two "elbowing each other fraternally" on the shelf.

It would seem from the account of the writer above quoted that a stringent law relative to the qualifications of practitioners of medicine, and providing inspectors, etc., etc., does exist, but that, like some laws which might be mentioned nearer home, it is more ornamental to the statute-book than useful to the public.

ACCORDING to the London *Lancet*, at the recent meeting of the British Pharmaceutical Conference the subject of marking in some way prescriptions calling for unusual doses of medicine was discussed. A Mr. Hampson proposed that the initials of the prescriber be written in brackets immediately after the unusual dose, thus:

Tr. digitalis, $\frac{3}{4}$ ss [J. R. L.]

and asserted that this was always done in this country (United States)!! In Germany and Austria, it is stated, it is the custom to put an exclamation-mark. We think the adoption of some such custom with us would be very well, and would tend to aid apothecaries in detecting those mistakes in prescribing which every practitioner makes sometimes in his life.

IN another column will be found a letter from Prof. Gross, in regard to the Miller Memorial Home. Whilst endorsing the sentiments of the venerable professor to the fullest extent, we would like to add one word. The popular reprints of the books of Dr. Miller have made money for some one. In all probability, not one cent of their earnings has ever found its way back to the author. Well may it be said of the American publishers of English books, "Other men labored, and ye are entered into their labors." Would it not be well for those who have accumulated fortunes by the publication of the works of Professor Miller and his colleagues to offer to his memory tithes from the storehouses filled by his toil?

WE learn from Boston that the Medical Department of Harvard University has just become the possessor of a large and valuable museum of models of diseases of the skin, the munificent gift of Dr. Edward Wigglesworth, of Boston, a gentleman well known in connection with the dermatology of the present day.

The collection embraces some two hundred models, the work of J. Baretta, of Paris, who is recognized throughout Europe as a most successful modeller and artist. The museum represents models of all of the commoner diseases of the skin, as well as a large number of rare forms, copied from the St. Louis Hospital collection. As works of art and accurate representations of disease, the pieces are remarkably fine, and portray the various affections in a most truthful manner. This is the largest and in fact the only complete museum of the kind in our country; and we congratulate Harvard upon being the recipient of such a generous donation from an individual.

WE learn from a recent exchange that the English government is offering iron hospitals to various unions throughout Ireland for the sums of £220 to £250 and £280, according as they are to contain twelve or twenty patients. They can be set up and made ready for occupation in a month, and are said to be with water-closets, nurse-rooms, wash-rooms, etc., complete. If they be what they seem, these iron hospitals appear to solve the question of hospital construction, costing, we should suppose, furnished, not more than one hundred dollars a bed.

In the abstract of Dr. Flagg's paper, p. 56 of our last issue, *cervical* twice occurs where it should be *crucial*.

CORRESPONDENCE.

MILLER MEMORIAL HOME.

TO THE EDITOR OF THE PHILADELPHIA MEDICAL TIMES.

DEAR SIR,—Nearly two months ago I received from Dr. A. G. Miller, son of the late Professor Miller, of Edinburgh, a copy of the subjoined circular, inviting the co-operation of the medical profession of the United States in furtherance of the object therein stated.

In consequence of absence from the city and of various pressing engagements, I was reluctantly compelled to remain silent until the present moment. I now call the attention of my professional brethren to the subject, and sincerely hope that the appeal will meet with a prompt and hearty response.

There is the strongest reason why such an appeal should be generously met on this side of the Atlantic. For nearly a quarter of a century the surgical writings of Dr. James Miller, for many years Professor of Surgery in the University of Edinburgh, were the text-books of the medical students of our schools, and the works that were daily consulted by our practitioners, not only in cases of emergency, but as a part of their daily reading and contemplation. Both his "Principles of Surgery" and his "Practice of Surgery," edited by Dr. Sargent, of this city, passed, if I mistake not, through four editions in this country, and enjoyed for a long time an unbounded popularity. Even at the present moment they are used as text-books in several of the American schools of medicine. It is not too much, then, to say that the family and friends of Prof. Miller have a substantial claim upon our gratitude. But this, although a very important one, is not the only reason why we should extend a generous hand to this praiseworthy enterprise. Every contribution that is made in aid of such an object in behalf of a British professional brother at once assumes the character of an international courtesy, and, as such, it cannot fail to strengthen the bonds of good fellowship between the two nations.

The late Prof. Miller was not only a great writer and teacher, but a most accomplished practitioner, a Christian gentleman, and a warm-hearted philanthropist, never wearying in his efforts to suppress vice and immorality, and to improve the condition of the humbler classes of people in his own and in foreign countries.

Subscriptions may be remitted directly to Edinburgh, to the address of Dr. A. G. Miller, or to Dr. Barton, to my care, Eleventh and Walnut Streets. Medical journals, friendly to the object, will please copy.

I have the honor to be, very respectfully, your friend and obedient servant,

S. D. GROSS.

PHILADELPHIA, October 15, 1873.

"MILLER MEMORIAL HOME."—Shortly after the death of Prof. James Miller, a few friends raised, by private subscriptions, about £1600 as a memorial to him. Knowing the late Professor's long connection with, and deep interest in, Medical Missions, this sum was given towards

the purchase of 56 George Square, as a 'Home' for the students while being trained by the Edinburgh Medical Missionary Society as Medical Missionaries. This sum, however, was short of the purchase-money by £700. Since getting the house, the directors have had to spend more than £300 additional, in necessary improvements and repairs. They now appeal, therefore, to the public, for £1000 to enable them to clear off all debt upon the house, and to establish it as really the 'Miller Memorial Home.' Should more than the thousand pounds be received, it is proposed to place a suitable portrait or bust of the late Prof. Miller in the 'Home.'"

PROCEEDINGS OF SOCIETIES.

BIOLOGICAL AND MICROSCOPICAL SECTION OF THE ACADEMY OF NATURAL SCIENCES.

OCTOBER 6, 1873.

DIRECTOR W. S. W. RUSCHENBERGER, M.D., in the chair.

PRESENT—Drs. J. G. Hunt, McQuillen, Tyson, W. Hunt, and Richardson.

Visitors—Dr. Leffmann, Mr. C. E. Betticher.

Dr. J. GIBBONS HUNT exhibited specimens of, and made an important verbal communication respecting, the curious alga which polluted the reservoir of the Camden Water-Works last summer. During the course of his remarks he observed, "In July last the water in the basin at Camden, New Jersey, was found to be unfit for use. When drawn from the hydrants it was offensive to both taste and smell. On examining this water with the microscope, I found in it a plant, belonging to the Nostochaceæ, diffused in great abundance through the fluid in gelatinous masses of an opalescent or faint olive-green color. These jelly-like masses were much broken up, indeterminate in form, and enveloped innumerable spiral and brittle filaments, each having from three to fifteen turns.

"Cells of two kinds make up the filaments of this plant. Several subquadrate cells, about $\frac{1}{8000}$ of an inch in diameter, are arranged in linear series; then, at nearly regular intervals, globular cells—perhaps heterocysts—of equal size, and about the same diameter as the other cells, are interposed. Both kinds of cells are filled with granular contents. Owing to the extremely brittle character of the filaments, it was impossible to tell how many spirals completed an adult plant. If placed in pure water, all the cells became quickly separated, and the ripest exploded like miniature bombs, scattering their granules all round. This made it very difficult to preserve a specimen. By using a medium of the same density as the gelatinous water, I have succeeded in preserving a slide of this interesting plant, which I exhibit to the Section, quite unaltered in appearance.

"It is possible this plant is the same that Mr. Thompson found in Lake Ballydrain, near Belfast, Ireland, and described as *Trichormus Thompsoni*, in the *Mag. Nat. Hist.*, vol. v., 1837. It is characteristic of the Nostochaceæ to increase with great rapidity under peculiar conditions. During June of this year, little or no rain fell on the Camden basin for nearly thirty consecutive days, and the sun shone with almost unobstructed power on the still surface of the water. I venture to mention the subject at this meeting, because I am not aware that the plant has been found before in this

country, and there are no correct figures of it in the books."

Dr. WILLIAM HUNT inquired if any diseases were especially prevalent in Camden at the time this alga made its appearance and flourished in the reservoir.

Dr. J. G. HUNT did not know of any which prevailed to an unusual degree.

Dr. JAMES TYSON asked if Dr. HUNT could suggest any remedy for the exuberant growth of this plant.

Dr. J. G. HUNT replied that the only one which had occurred to him was the plan of continued agitation of the water, as, for example, by forcing it to the top of a tall stand-pipe and letting it overflow into the basin from a considerable height, thus mechanically breaking up the spirals of the alga and interfering with its growth.

Dr. J. G. HUNT also showed the inosculating vessels in a leaf of the *Euphorbia ipsecacuanha*, and likewise a series of receptacles in the same plant, reminding one of the air-cells of the lung. He remarked that he exhibited them as specimens of a new style of work (the method for which he would lay before the Section when perfected), that would do away with much of the labor of dissection, and display vegetable structures in a unique manner, which he believed could not be equalled in Europe or America.

Dr. RUSCHENBERGER inquired whether drawings or photographs had been made of the beautiful specimens brought before the Section by Dr. HUNT.

Dr. HUNT replied that no drawing or photograph could do justice to the views of these objects as afforded by the invaluable binocular microscope.

Dr. J. G. RICHARDSON suggested that by taking a photograph through each tube of the binocular microscope and afterwards combining these two pictures by looking at them in the ordinary hand stereoscope, we would secure a perfect and complete reproduction of the exquisite image in relief obtained by the aid of double-tubed instruments, and he recommended that the method should be tried at an early opportunity.

REVIEWS AND BOOK NOTICES.

ON THE MECHANICAL TREATMENT OF DISEASE OF THE HIP-JOINT. By CHARLES FAYETTE TAYLOR, M.D., Surgeon to the New York Orthopædic Dispensary and Hospital, etc. New York, William Wood & Co., No. 27 Great Jones Street, 1873.

A practical book, by an intensely practical man. Guilty of no useless verbiage, indulging in no flowers of rhetoric, at times perhaps even doing violence to strict methods of construction, the author marches straight to his end, possessing the not trifling merit of making himself, as a rule, thoroughly understood.

His first chapter plunges incontinently into statistics derived from the hospital and dispensary of which he is chief, as well as from his private practice, from which he deduces the result, founded on the carefully-collected histories of about four hundred cases, that "disease of the hip-joint, at least so far as regards the mechanical treatment, may be regarded as essentially traumatic." This view has been maintained for a number of years past by Dr. Sayre, and is put forth with much vigor in Dr. Louis Bauer's Lectures on Orthopædic Surgery. New York surgeons have indeed very generally adopted it. Its importance in relation to both prognosis and treatment cannot be overestimated; and the sooner we of Philadelphia make it a part of our creed, renouncing our antiquated notions of the necessary dependence of chronic affections of this or indeed of any articulation on a pre-existing strumous diathesis, the sooner shall

we be able to claim for ourselves the credit of an intelligent conservatism in their management.

While justly according to Dr. Henry G. Davis, of New York, the merit of being the first to combine locomotion with extension in the treatment of hip-disease, Dr. Taylor considers the splint which that surgeon uses inefficient. The advantages which he claims for his own modification are, that in reaching to the ground it entirely prevents concussion of the joint in walking, that in extending the entire length of the limb it controls its movements and accomplishes its extension much more effectively, and that by a special adaptation it overcomes adduction as well as flexion of the thigh upon the pelvis. These points appear to us to be well taken. In our own experience we have found all of these modifications to be of the greatest possible advantage; but, at the same time, it must be confessed that Prof. Sayre's splint has, in his own hands, been productive of results which scarcely warrant the severe strictures which our author passes upon it. These successful results are, no doubt, in a great measure attributable to the extreme care with which Dr. Sayre applies his adhesive straps and his admirable method of in-and-out bandaging. It is safe to say that few surgeons can use it with the same success.

The gist of the present little monograph, that which affords the justification for its publication, without which no author should dare to show his face, appears to consist in the attempt to methodize the process of extension, dividing it into stages which are the exact reverse, in point of order, of the stages of the disease, thus making it both easier and more complete; attempting for the distorted coxal articulation what Mr. Adams accomplished for the distorted tarsal articulations in talipes varus. He, it will be remembered, proposed to divide the treatment of that affection into two distinct periods, one of which should always be perfected before the second was begun.

Those who have conscientiously followed this plan, overcoming the lateral distortion by force directed through the transverse tarsal joint before attempting to bring down the heel by force directed through the ankle-joint, do not need to be informed of its superiority over the old, blundering method, which attempted all at once. Dr. Taylor does not tell us whether he derived the inspiration for his suggestion from Mr. Adams or not, but the similarity in the two modes of procedure is certainly close and suggestive. The two separate sets of muscles which produce distortion and demand extension in hip-disease are the adductors and the flexors. As the former have been the last to become contracted under the influence of the irritation in the joint, our author considers that they should first be relaxed, and that only when that object is effected can we hope to act with the greatest amount of efficiency on the latter. In order to accomplish this, he places the diseased limb on an inclined plane reaching below the foot and exactly adapted to its deformed position. To the limb thus supported and flexed he applies his splint, and (the patient retaining the dorsal decubitus) commences abduction by means of a powerful screw. When abduction is an accomplished fact, whether that be at the end of an hour, a day, or a week,—the last-mentioned being the longest period of time which he has found necessary to devote in ordinary cases,—he is ready to begin to lower his inclined plane and thus overcome the contraction of the flexors. The application of the splint of course assumes the employment of a certain amount of extension. The entire process of overcoming these contractions may occupy in difficult cases a fortnight. At the end of that time relaxation is complete, and all that we need is to keep up vigorous extension, allowing the patient perfect freedom of motion through the joint, an essential to a

return to a healthy condition. By this means, he claims, a resort to tenotomy is almost never necessitated. Our own practice is to overcome the contractions by means of forcible manipulations under anæsthesia, and immediately apply the splint and allow locomotion. We have had reason to feel tolerably well satisfied with the results thus obtained; but the plan here proposed is rational and scientific, and the author's acknowledged success should certainly lead to its having a fair trial. There are numerous practical apothegms scattered through the sixty-two superbly printed pages which the seven brief chapters of the work occupy, which we would gladly quote and enlarge upon did space permit. The illustrations are very unequal both in design and execution, but generally serve to convey the desired idea. What is unfortunately very unusual in an American medical work, they are all original. We would call the author's attention to the fact that Fig. 13, which is referred to on page 36 as representing the appearance of the instrument when applied, places it outside of the shoe, which we take to be an error.

THE DISEASES OF THE PROSTATE: THEIR PATHOLOGY AND TREATMENT. Comprising the Jacksonian Prize Essay for the Year 1860. By SIR HENRY THOMPSON. Fourth Edition. Philadelphia, Henry C. Lea, 1873.

The appearance of the fourth edition of this standard essay is proof that monographs of the higher order are not always the barren waste of "meritorious energy" that Dr. Tilt would have us think. Certainly few prize essays have been more highly prized and praised. The distinguished author informs us in the preface to the present edition that he found it necessary to make several additions, at the same time compressing existing material. We have always deemed the essay a model of its kind. It is terse in style, rational in method, and thorough in all its parts. From original anatomical work the writer passes easily to the consideration of morbid changes and their treatment. In no other volume that we recall is there to be found so good a description of acute prostatitis or abscess of the prostate gland. The same remark is applicable to the changes in the urethra from prostatic hypertrophy. Perhaps the most original chapter is the one entitled "The effects of enlarged prostate in relation to the function of micturition, retention, incontinence, engorgement, and overflow." This subject has received masterly treatment throughout; and one naturally refers to it as the best authority. The allusion to the internal meatus of the bladder, particularly to the instructive morbid appearances therein located, is provokingly insufficient. It would have been a point gained, in our opinion, had our author emphasized the direction which is too little heeded by pathologists,—viz., to open the bladder at its summit, in examination of all suspected lesions of the genito-urinary tract, prior to making the destructive incision along the urethra.

THE PREVENTIVE TREATMENT OF CALCULOUS DISEASE, AND THE USE OF SOLVENT REMEDIES. By SIR HENRY THOMPSON. Philadelphia, Lindsay & Blakiston, 1873. 8vo, pp. 72.

The little book before us is a reprint of two lectures given at the University College, London. The first lecture treats of the early history of calculus and its treatment: the second, of the treatment of stone in the bladder by solvents. After giving a brief résumé of "all the nauseous mixtures described from Pliny to Joanna Stephens and onward through Chittick, with his locked cans, to the nostrum-dealers of our own times," the writer states as his opinion that the most rational hope of success is secured in the early stages of uric acid calculus when by the liberal use of the salts of potash

—notably the citrate and acetate—the symptoms of nephritic and cystic calculus may be ameliorated, and in some cases entirely disappear.

SELECTIONS.

ALBUMINOUS EXPECTORATION.

II.

LET us pass on to the opinions enunciated by MM. Woillez and Marrotte, and see if *traumatic perforation* can give the key to albuminous expectoration as a result of thoracentesis. Woillez, in his *Traité des Maladies Aigues des Organes Respiratoires*, pronounces the opinion that puncture of the lung in thoracentesis is more common than is usually supposed. At the meeting of the Société Médicale des Hôpitaux on June 28, he dwelt upon the fact of recent puncture of the chest; on the physical and chemical similarity of the fluid extracted from the pleura to that expectorated; on the issue of a small quantity of blood by the canula; and, above all, on the presence of blood in the earlier portions of the expectorated liquid; finally, on the issue of bubbles of air through the canula during the course of the operation. He attributed the mischief to the operation itself, consisting as it does in plunging a sharp instrument more or less roughly and directly into the chest, without knowing, says M. Woillez, whether the lung be floating or not in the liquid, and whether it do not advance to meet the point of the instrument, and, likewise, not knowing if some local adhesion do not retain it within reach of this point. M. Woillez considers one of the best proofs of the lesion of the lung by the trocar to be more or less rapid expectoration, after puncture, of a fluid resembling that extracted from the pleura; and amongst the outward characteristics he cites one having a particular value in his eyes,—namely, that the expectorated fluid may be sanguineous. In the cases under consideration, however, not one of the true signs of perforation was noted; neither issue of blood through the canula, nor passage of air from the bronchial tubes into the pleural cavity by pneumothorax, is spoken of. MM. Marrotte and Woillez have never demonstrated any perforation, nor has any ever been found on necropsy. It is, besides, as pointed out by M. Hérard at the meeting of July 11, 1873, necessary to know if effusions followed by sero-albuminous expectoration were small effusions, and if the lung may have been injured during the operation. But, in M. Terrillon's twenty cases, in three only from one hundred to fifteen hundred grammes of fluid were removed; whilst in the others the amount rose from two thousand to five thousand five hundred grammes. Therefore, in the majority of cases the lung was removed from the thoracic wall, driven back to the vertebral column, and thus sheltered from the point of the trocar. M. Béhier points out, in his lecture on June 13, that it is an incontestable fact that if the albuminous expectoration arose from perforation it would not take an hour to come on: it would be as immediate and instantaneous as the injury itself, as in Boule's case already mentioned. In that case, the lung would have been wounded four times in succession, notwithstanding that every precaution against such an accident was taken. It is evident that this cannot be the fact, and consequently perforation of the lung by the trocar may be put aside.

We now come to the third explanation,—the *passage of the pleural liquid into the pulmonary vesicles, and thence into the bronchial tubes*. This will not detain us long, for it is acknowledged to be impossible; it is con-

traded by the anatomy of the lung, and by the physiology of combined absorption and circulation, which teach us, as M. Terrillon says, that the fluid passes into the vessels and is carried into the general circulation. Why, then, should not the pleural liquid be submitted to this physiological law? Besides, in bringing forward this explanation, the fact that the pleura loses its absorbent properties when it is inflamed and becomes covered with false membranes, is entirely lost sight of.

We now come to the fourth explanation, enunciated by M. Pinault in 1858, and repeated with much clearness and force by M. Hérard in 1872,—the *transudation of the sero-albuminous liquid through the alveolar walls* by means of rapid pulmonary congestion with pulmonary œdema. This is based on sound physiology and on pathological phenomena, and is upheld by the majority of physicians, MM. Hérard, Moutard-Martin, Béhier, Dujardin-Beaumetz, Brouardel, and others, and is demonstrated by clinical observation and necroscopic examination. Physiology explains this transudation as follows. Section of the pneumogastric nerves brings on a frothy effusion in the bronchi and a sanguineous engorgement of the pulmonary tissue. One of the two products of secretion is nothing but bronchial mucus; the other, which is most abundant, is serous matter. M. Jaccoud, touching on the œdema of congestion, in his *Elements of Internal Pathology*, says, "constituted by a serous exudation in the walls and on the free surface of the alveoli, œdema is the constant and necessary consequence of all pulmonary congestion of a certain standing." M. Charles Robin, in his *Traité des Humeurs*, acknowledges that the capillary network of the surface of the alveoli may, under the influence of either temporary or permanent congestion, allow a certain amount of fluid quite distinct from the bronchial mucus to exude. M. Moutard-Martin grapples with the question in a very clear and decided way. "You cannot," he remarks, "clinically establish your so-called pulmonary perforation, while on our part we do clinically establish the sero-sanguineous congestion of the lung, by the presence of slight dulness and subcrepitan râles, of pulmonary œdema and hæmoptysis." That it may be proved after death is shown in M. Gombault's case reported by Terrillon. In the explanation of this transudation, it is easy to understand that, when a lung has been compressed for a certain time, when it has been excluded from the air, that natural excitant, penetrating rather suddenly into the pulmonary vesicles, would produce irritation of the mucous membrane, and an excitement of the vessels which in a very short time would be followed by paralysis, of which the inevitable consequence is passive congestion with œdema. If we add to this the destruction of the epithelium which clothes the alveoli and strengthens the walls of the capillaries, the probability of MM. Hérard's and Moutard-Martin's explanation will be much increased.

In certain cases of albuminous nephritis, the desquamative congestion at the commencement allows the capillaries of the kidney to let the albumen escape into the tubules and mix with the urine; here the modified alveolar mucous membrane readily allows the albuminous serosity to filter through. Further evidence of the rapid congestion of pulmonary œdema, and of the expectoration resulting from this œdema, may be found in the analysis of the two fluids. The very complete researches of M. Dujardin-Beaumetz show that these fluids have a very distinctly marked difference of character. He says, "while both fluids contain urea, mucine, and albumen, the expectorated fluid only contains 1 part in 1000 of albumen; the other, on the contrary, contains from 66 to 88 parts in 1000. This difference in the analysis," says M. Dujardin-Beaumetz, "includes, in our opinion, the difference in the origin;

and we can now affirm that the expectoration is exclusively derived from the bronchial mucus."

Further, in favor of the theory of pulmonary congestion as an etiological condition of the accident in question, the different cases of albuminous expectoration after thoracentesis, observed by M. Louis Lande, Professor in the Bordeaux School of Medicine, must be recorded. He proves the non-identity of the two fluids in a decisive manner by citing the cases of Dr. Musson and Dr. H. Gintrac, in which the phenomenon came on after thoracentesis, performed for purulent effusion. To this may be added the conclusive proof given by MM. Revillout, Jalabert, Renan, etc. M. Revillout has applied himself specially to this subject; and the series of investigations which he has published in the *Gazette des Hôpitaux* for June and July are calculated to throw much light on this interesting problem. They are on very simple cases, attacks of albuminous expectoration not only arising without any thoracentesis, but even without the presence of any pleurisy.

In a series of clinical records, M. Revillout has accumulated a progressively significant number of cases, which, from their great theoretical and practical interest, deserve to attract the attention of physicians. In one of them, an old man, subject to attacks of asthma, did not at the time suffer, nor had ever suffered, from pleurisy. On two occasions he was seized with alarming crises, characterized by a cough, which at each expiratory movement brought up a mouthful of albuminous fluid tinged with blood, with which the patient soon filled a large basin.

In a similar case, M. Jalabert, of Carcassonne, rejecting all idea of a pleural origin for the fluid, especially as the patient was subject to similar attacks from time to time, which were completely relieved by bleeding, did not hesitate to diagnose pulmonary congestion with excessive bronchial secretion, and combated the attack by agents capable of exciting the contractility of the small vessels, such as ergotin and syrup of belladonna.

These cases, M. Revillout remarks, lead us to form more just notions of acute pulmonary œdema. Similar cases have also been described by Robert Bree and Laennec. These accidents are not brought on by asthma only; for Dr. Renan, of Saumur, gives a report of a similar case which might perhaps be considered as a manifestation of paludal infection. It is, then, to the fourth explanation of the phenomenon of albuminous expectoration that the balance of evidence inclines. The subject is one of great clinical interest, and deserves the attention of medical observers, with a view to the definitive solution of the question at issue.—*British Medical Journal*, October 11.

GLEANINGS FROM OUR EXCHANGES.

TREATMENT OF ENURESIS (by Dr. Buyelmann, of Cologne).—The author was induced by an article in the *Berlin. Klin. Wochenschrift*, 1871, No. 5, to try the syrup. ferri iodidi in a severe case of incontinentia urinæ. The patient was a young girl, thirteen years old, of nervous temperament, and anæmic. The principal complaint was the incontinence of urine, so severe as to prevent her from walking any distance from her home without wetting herself. In addition to generous diet, she took, for three weeks, syrup. ferri iodidi, seven grammes, ad aquæ, syrup. simp., aa fifty grammes; a teaspoonful every two hours. After a week's treatment there was a marked improvement, and in two weeks more she was discharged well.—*Berlin. Klin. Wochenschrift*, No. 6.—*Boston Med. and Surg. Journal*.

EXOPHTHALMIC GOITRE.—Boddaert (*Bull. de la Soc. de Méd. de Gand, Gaz. Méd.*, 1873, p. 141) experimented on rabbits with reference to the origin of this condition. Ligatures were placed upon the external and internal jugular veins at the base of the neck, and the two cervical cords of the sympathetic were cut. An exophthalmia resulted, continuing several days, diminishing gradually as the collateral venous circulation became developed and as the effects of the section of the sympathetic disappeared. Exophthalmia following the ligature alone, due to distention of the orbital veins, is much less pronounced. An enlargement of the thyroid is produced by section of the sympathetic and ligature of the inferior thyroid vein between the four jugulars. These experiments, combined with the discovery of lesions of the sympathetic, whose effects are analogous to those produced by section (atrophy of nerve-elements, hypertrophy of connective tissue) in a number of cases of Basedow's disease, are considered as explaining the phenomena of the disease. In exophthalmic goitre, an obstruction to the circulation occurs; the superficial veins, especially of the neck, become swollen; there is a tendency to hemorrhage, an increase of splenic and hepatic dulness, occasional dropsies, œdema, and the enlargement of the retinal vessels observed by Graefe. Boddaert hence produces this theory of exophthalmic goitre. In the majority of cases the pulsations of the heart increase in number,—120 to 200 even; this may continue for months. The veins are insufficiently emptied during the diastole; a venous congestion results, more marked from a more or less complete paralysis of the sympathetic. The effects become most marked in the eye and thyroid body, from the development of the retro-ocular venous system and the great vascularity of the thyroid. This theory is considered as explaining the observation of Trousseau, where the exophthalmia and the thyroid tumor came on during a night, the goitre disappearing suddenly and returning afterwards; also, the diminution of the exophthalmia and the thyroid body, as the heart beats less rapidly.—*Boston Medical and Surgical Journal*.

THE ELECTRO-MAGNETIC CURRENT IN THE SECOND STAGE OF LABOR (*Edinburgh Medical Journal*, September, 1873).—Dr. A. E. McRae details three cases of *inertia uteri* in which the use of galvanism was attended with very happy results, bringing on contractions when they had ceased entirely, hastening delivery, facilitating the discharge of the placenta, and counteracting a decided tendency to post-partum hemorrhage. He believes that this agent should be employed when the os is dilated or dilatable; when the uterine action has ceased, and cannot be aroused by stimulants, friction, or other oxytoxic agents; when there is evidence of uterine action becoming weak, irregular, or intermittent; and when there is post-partum flaccidity of the uterus, or post-partum hemorrhage not caused by hour-glass contractions. The method of application is as follows. One of the electrodes is applied to the abdominal parietes, and retained by the patient's hands, with a layer of blanket between, to prevent the current entering by the finger. The other pole is placed against the perineum, and retained by folds of blanket or a small pillow. The force can be moderated or increased at will by the left hand of the accoucher working the "regulator" while the right hand manipulates the child's head. The electrodes are now attached to the machine, the current is set on, and, in obedience to a law in electro-physics, takes the shortest and most direct route from the abdominal to the perineal electrode, or *vice versa*. The uterus lying in this direct line shares in the influence, its fibres contract, and in so doing aid in expelling the uterine contents; its action

being limited by the electric force evolved, the quantity and condition of the muscular fibre of the uterus, and the patency of the passages. When the head descends and comes towards the perineum, the perineal electrode should be shifted to the coccygeal region, thus exercising a *vis a tergo*, and, by relieving the perineal muscles of their tonic contractions, allowing them to become flaccid and permit dilatation. The head is thus born in the proper line of the axis of the outlet with freedom.

DIGITALIS IN ACUTE FEBRILE DISEASES (*The Practitioner*, September, 1873).—The question of the power of digitalis as a heart tonic in the adynamic fevers is a very important one, and is becoming more so as we recognize the frequency with which sudden failure of the heart is a cause of death in diseases running a protracted course, or occurring in subjects whose tissues were damaged by disease or intemperance.

Dr. Anstie believes that we are entitled to view muscular heart-failure in acute febrile diseases as essentially dependent upon an enforced rapid action, under high temperature, prolonged for a period which is excessive in proportion to the vital recuperative power of the cardiac muscular tissue. The same result will be produced in a shorter period if the tissues of the heart have been previously so modified by pathological degeneration as to render their restoration to a healthy state unusually difficult. The practical effect at which we should aim in such cases, merely for the sake of preserving the soundness of the muscular tissue, if for no other reason, is the simultaneous slowing and strengthening of the ventricular contractions; and clinical experience has shown that this effect may be most safely and surely produced by the use of digitalis.

Dr. Grimshaw has given one and a half ounces of the infusion of digitalis every three hours for five or six days together, not only with impunity, but with seeming benefit, in some cases of typhus fever; Wunderlich has administered daily thirty to fifty grains of the powdered leaves; and Trousseau in uterine hemorrhage has given in twenty-four hours one gramme (15.6 grains) of digitalin, the normal dose of which is from $\frac{1}{4}$ to $\frac{1}{2}$ of a grain. The true explanation of the tolerance of such enormous doses must be sought in the experiments which have shown that the real action of digitalis on the heart is that of a stimulator, instead of a paralyzer, of the cardiac muscular substance, which, weakened and exhausted by over-work, high temperature, or profuse hemorrhage, would sustain and even require a dose of digitalis merely to support a sufficient amount of contraction to continue life, which dose in health would fatally tetanize the heart.

OIL OF TURPENTINE AN ANTIDOTE IN POISONING BY PHOSPHORUS (by Hermann Koehler. [Note by K. B. Hofmann, in *Med.-Chirurg.*, Rundschau, June, 1873. Translated for the *Detroit Review* by J. Henry Carstens, M.D.]).—The author published (after he had brought his discovery to the notice of the profession) his observations in a paper, "The Value and Significance of the Oil of Turpentine containing Oxygen in Phosphorus Poisoning, etc. Halle, 1872." He sums up the result in the following sentences:

Oil of turpentine containing oxygen is a reliable antidote of phosphorus.

The kind of turpentine, if of this or that species of pine, if German or French (in opposition to Vetter's statement that only the latter has antidotal powers), is of no importance, if it has only not been rectified for some time, and contains oxygen.

The oil of turpentine *only* acts in the *stomach*, and is best introduced by gelatin capsules; to emulsify the turpentine oil with the yolk of an egg is not advisable, as the latter contains the oil of the egg, which facili-

tates the solution of the phosphorus. For every 0.01 gramme of phosphorus *one* gramme of oil of turpentine as an antidote is sufficient.

The turpentine must be administered as soon as possible after the poisoning. Twenty-four hours after the introduction of the phosphorus the oil of turpentine does not act.

The beneficial action of the antidote is due partly to its containing free oxygen for changing the poisonous phosphorus to the non-poisonous phosphoric acid, and partly by combining with the phosphorus to form the turpentine-phosphorous acid, which is not injurious. This acid, which is only dangerous in very large doses, appears (like laurin and turp. oil camphor) to be eliminated unchanged by the kidneys. It and its salts rapidly absorb oxygen from the air, and oxidize to a resinous derivative of the oil of turpentine, containing phosphoric acid, and this rapid oxidation has prevented an analysis for the ultimate elements.

TAPPING IN HEPATIC ASCITES (*Dublin Journal of Medical Science*, August, 1873).—Dr. John M'Crea reports two cases of ascites which were greatly benefited by repeated tapplings. In the first case the disease was of a rachitic nature, and the treatment, in addition to the withdrawal of the fluid, consisted of the free administration of sal-ammoniac. In the second, diuretics and purgatives failed to make any impression; the operation was repeated fifteen times, and about forty gallons of fluid were withdrawn from the patient. In both cases the accumulation of fluid ceased, and was followed by almost perfect restoration to health.

Dr. M'Crea claims the following advantages for early tapping in hepatic ascites:

1. It relieves intra-portal pressure, and prevents the backward pressure generated by the obstruction from seeking vent in diarrhœa, hemorrhoids, hæmatemesis, etc.
2. The removal of the pressure which the effusion exercises on the liver will facilitate the development of collateral circulation through the more healthy parts of the viscus.
3. The relief of the abdominal tension will make it easier for the vena cava, vena azygos, and parietal abdominal veins to establish a collateral circulation between the abdomen and the chest.
4. The removal of tension from the vena portæ and its branches will promote the absorption of remedies.
5. We clear away an impediment to the digestion and absorption of nutriment.
6. We relieve the kidneys, which exhibit increased activity after each tapping.
7. In ordinary cirrhosis we remove a pressure which is assisting to produce contraction.
8. We afford relief to other important organs, the distress of which makes tapping at least an absolute necessity.
9. We avoid the danger of typhoid peritonitis, which sometimes attends late tapping. Finally, we may hope for better results in liver dropsy by looking on tapping not merely as a palliative, but even as a radical, method of treatment.

SUCCESSFUL (?) REMOVAL OF THE SPLEEN.—In the *Raccoglitori Medico*, Dr. Sonsino gives an account of a case in which, on June 20, Dr. Attilio Urbinato of Cesena removed a hypertrophied and mobile spleen. The incision was made in the middle line, and prolonged above the umbilicus, being at least seven inches in length. The operation was performed without much difficulty. After tying three small cutaneous arteries, opening the peritoneum, and drawing aside some loops of intestine, the spleen was seen, free from all abnormal adhesions, and of enormous size. At the inferior part was seen the gastro-splenic epiploön, which was adherent; and

the vessels here were extremely dilated. At the upper part was seen the lower portion of the pancreas. The epiploön was detached, and the vessels tied. The ligatures, seven in number, were left inside without further precaution. The few adhesions of the pancreas were overcome without difficulty, simply by means of the finger. The largest vessels, and the connective tissue which surrounded them, were secured by a metallic loop and hempen ligature. The "toilette" of the abdominal cavity was made with great care. The patient lost but little blood. The ligatures of the vessels tied were passed out between the sutures, of which there were five deep and five superficial. The spleen weighed two and a half pounds. The operation lasted an hour; the patient bore the chloroform well, and subsequently appeared to be progressing favorably, but died of peritonitis three days after the operation.—*British Medical Journal*.

SYPHILITIC ALOPECIA.—That form of syphilitic alopecia which is independent of any eruption affecting the scalp, which accompanies the so-called secondary syphilides, and which is characterized simply by an extensive loss of hair, so that the greater portion of the scalp is denuded absolutely of hair, and not the scalp only, but also the eyebrows and eyelids (of eyelashes) as well, is often a persistent affection, and in my experience is only—very tardily, indeed—remediable by general (mercurial) treatment. I refer to the condition described above, as distinguished from the syphilitic alopecia, resulting commonly (in tertiary syphilis) from the limited and "discrete" loss of hair resulting from the formation of cicatrices consequent on (tertiary) syphilitic ulceration of the scalp. This kind of alopecia, which has by some eminent French writers been assumed to be identical with tinea decalvans (la teigne pelade), but which is to be distinguished from any even the most "diffused" forms of the latter disease by its want of definite limitation of margin, is, as I have found, readily (within a month or so) curable by the following topical remedies:

For the scalp, hydrargyri iodidi rubri, gr. v; attar. rosæ, ℥ij; olei amygdalæ, ℥x; unguenti simplici, ʒj.

For the eyebrows (where the skin is more tender), three grains of the mercurial iodide are used. The prescription is otherwise the same as before.

For the eyelids, which are more tender still, five grains of the yellow oxide of mercury, made by the recent method, are substituted for the iodide. The prescription is otherwise as above.

The French writers referred to regard secondary syphilis as merely a predisposing cause of tinea decalvans. I, however, regard the "secondary" syphilitic alopecia as a distinct disease.—*Balmano Squire, M.B., in British Medical Journal*.

A WAX CANDLE IN THE BLADDER OF A FEMALE.—This interesting case was observed a short time ago at the Hôtel-Dieu, Paris. The patient, on admission, complained of intense pain in the abdomen. The urethra, abnormally dilated, easily admitted the finger into the bladder, when a hard, voluminous body was felt. The woman stated that, on account of great difficulty in making water, she had passed a candle through the urethra and had accidentally let it slip into the bladder. It was readily removed with a pair of pincers. The end of the candle, which had been rounded with a knife, was covered with calcareous matter gathered there during the five weeks the candle had stayed in the bladder. Speedy recovery followed.—*Boston Medical and Surgical Journal*.

TOMATO-LEAVES AS A DIURETIC.—A French writer extols the leaves of the tomato (*Solanum Lycopersicon*) as a diuretic.—*Pacific Medical and Surgical Journal*.

PITURI.—A NEW NARCOTIC.—Dr. Bancroft, in a paper read before the Queensland Philosophical Society, enumerates the effects of the leaves of the "pituri," which are used by the natives as a stimulating narcotic in a similar manner to the betel of the East, and which form a substitute for tobacco. After detailing some experiments made with an infusion of the leaves, he thus describes their results:

"1. Period of preliminary excitement from apparent loss of inhibitory power of the cerebrum, attended with rapid respiration; in cats and dogs, with vomiting, and profuse secretion of saliva.

"2. Irregular muscular action, followed by general convulsion.

"3. Paralysis of respiratory function of medulla.

"4. Death, or

"5. Sighing inspirations at long intervals.

"6. Rapid respiration and returning consciousness.

"7. Normal respiration and general torpidity, not unattended with danger to life."

The poison, given by the mouth, acts with less vigor; when it is injected into the intestines the results are more certain. The animal has a longer stage of excitement, the convulsive fit is not so severe, and recovery is more certain. Torpidity remains for some hours.—*London Medical Record*.

ATROPIA IN STRYCHNIA POISONING (*Edinburgh Medical Journal*, September, 1873).—Mr. Samuel Buckley reports the case of a female, æt. 28, who for the purpose of suicide took an indefinite quantity of a patent "vermin-destroyer" containing strychnia. When she was seen, a half-hour later, she was in a state of perfect opisthotonos, with severe and painful spasms at exceedingly short intervals. Treatment was commenced by the inhalation of chloroform, but, this proving useless, atropia was injected subcutaneously, one-sixth grain every ten minutes, until three doses were given. A marked improvement resulted; the spasms grew milder and less frequent, and the expression more natural. The atropia was then given in doses of one-twelfth grain at longer intervals, until $1\frac{1}{2}$ grains had been administered. She then became conscious, the spasms ceased entirely, she fell into a profound but natural sleep, and after awaking suffered no further inconvenience.

The effects of the atropia were so marked in mitigating and counteracting the symptoms that no hesitation was felt in using the very large doses which have been mentioned.

RUPTURE OF THE BLADDER.—Dr. MacEwen reports the case of a lad, nineteen years of age, who had been habituated to excessive indulgence in alcohol, and who died suddenly during a debauch, having had no unusual symptoms except slight colicky pains in the abdomen and a desire to lie with his thighs flexed on his belly. On post-mortem examination the whole abdominal cavity was found to be filled with a straw-colored fluid, inodorous and non-ammoniacal. There were no peritoneal adhesions or inflammatory products of any kind. The thoracic and abdominal viscera were healthy, with the exception of the bladder, in which was discovered an aperture at the junction of the upper and middle thirds posteriorly. There were no ulcerations, appearances of gangrene, organic stricture, obstruction, or false passages. The rupture must have taken place either from temporary paralysis of the bladder, or from spasmodic stricture with violent muscular action in the over-distended viscus.—*The Lancet*, Sept. 27, 1873.

WRITER'S CRAMP (*Irish Hospital Gazette*, October 1, 1873).—Professor C. J. Rossander details the case of a strong, muscular man, æt. 32, who had suffered for two years from an entire inability to form letters or to make

any but perpendicular strokes of a pen. He was unable to move his hand towards the ulnar side, and when he attempted to do so the whole hand was forcibly jerked into the air. There was no loss of power in the arm or hand, other movements were normal, and it was only in attempting to form letters, and particularly several in succession, that the spasmodic action showed itself. Treatment was commenced by the daily injection of ten to twelve drops of a solution containing one per cent. of nitrate of strychnia, and by "massage" or the kneading and rubbing of the muscles of the hand and forearm. At the end of a week there was a decided improvement, and in a month the patient was perfectly restored to health.

REMOVAL OF BOTH SUPERIOR MAXILLARY BONES.—The *Centralblatt für die Medicin. Wissenschaft*, for June 21 contains a brief note of a case related by Podraski in the *Oesterr. Zeitschr. für prakt. Heilkunde*, No. 1, 1873, in which he removed both upper maxillæ from a man aged 42. They were the seat of a tumor which had the appearance of being malignant, being attended with pain and swelling of the lymphatic glands. It was, however, found to be a large ivory exostosis, which had almost obliterated the sinuses and nares. The patient died of pyæmia.

COMBINATION FOR CHRONIC DIARRHŒA.—Rayer advocates the combination of cinchona, charcoal, and bismuth in the management of chronic diarrhœa, in these proportions:

R Subnitrate of bismuth, 3j;

Cinchona, yellow, powdered, ʒss;

Charcoal, vegetable, 3j. M. Chart. xx.

S. Two or three times daily during the intervals between meals.—*Union Médicale*, No. 73.

MISCELLANY.

ANECDOTE OF NÉLATON.—A medical writer tells the following little story of the great French surgeon Nélaton. Speaking of a visit to one of the Paris hospitals, he says, "As we passed into the hall we heard groans, evidently of a child in great pain. The door leading to the sick-ward was ajar, and as we approached we heard the voice of a man talking earnestly with a little sufferer. There was something very affecting in the imploring tones of the child's voice and the tender and sympathizing replies of the physician, and it seemed to us no breach of etiquette to witness unseen, through the crack of the half-open door, the scene that was passing within. On a narrow pallet near the window lay a fine boy, nine or ten years old, dying of cancer developing itself between the eyes and behind the nose. It had not shown itself externally, but had destroyed the sight, and was attended with excruciating suffering. By his side sat a stately white-haired man, holding with one hand the two of the little patient, while with the other he caressingly smoothed his hair. The child told the story of his pain, '*Ah, je souffre tant!*' to which the old man listened patiently, promising to devise some relief. Then he rose to go, but first bent over the boy, and, with tears dropping from his eyes, kissed his forehead as lovingly as a mother. The white-haired man was the world-renowned Nélaton, lately summoned to attend the fallen Emperor."

In the recent inquiry into the condition of the Civil Service in Ireland, it was natural that there should be some reference made to the incomes obtained by professional men in this country. Some extracts from the evidence given may be of interest. Dr. E. Kennedy stated that in Dublin a competent medical man, having the advantages of a hospital and connection, ought, when of ten years' standing, to make from £800 to £1200 a year; if reasonably successful, he ought then to double his income in the course of the next five or six years, and a really successful man ought in a few years more to double his income again; but the instances in which a medical man reaches £6000 a year or £5000 are very rare. The advantage of a hospital physician is that his pupils become scattered about the country and send up patients to him. In the chief provincial towns of Ireland, with a large population, the leading medical man may possibly reach from £1200 to £2000 a year. Sir D. Corrigan, who was also examined, thinks there are perhaps ten or twelve medical men in Dublin making from £2000 to £6000 a year, or more; and there are a great number, whose names are not very prominently before the public, making from £800 to £1000 a year. There are general practitioners in Dublin, men who have never written a line, and who are unknown to the public as men of great eminence, who sometimes accumulate large fortunes.—*London Lancet*.

THE great Dr. Johnson, who said in his day a great many wise things, but also several foolish things, and who thought he knew everything, has thus written in his Life of Akenside: "A physician in a great city seems to be the mere plaything of fortune. His degree of reputation is for the most part totally casual: they that employ him know not his excellence; they that reject him know not his deficiencies."

These observations are a bundle of fallacies, and if I think them worth noticing, it is to ask you not to be so mistaken as to believe in them. If you do believe in them, and act on them, you will assuredly repent it. Go through the lives of the eighteen or twenty men included in the volume I have noticed [The Lives of British Physicians, extending from Linacre, in 1410, to Gooch's death, in 1830, a period of about four hundred years], and you will learn this: that, whether they were polished in manners like Linacre and Meade, or boorish like Radcliffe, a staunch royalist like Harvey, or a Roundhead like Sydenham, a very martinet in dress like Jenner, or plain as a Quaker in costume like Sir Thomas Browne, there was one quality which all possessed in common, and that it was which placed fortune at their feet,—unremitting hard work in their early days. They were never the playthings of fortune, as Dr. Johnson foolishly ventured to say: they commanded fortune.—*Sir Dominic Corrigan: London Lancet*.

THERE appears to be a great mortality this season among the English grouse, concerning which a correspondent of the *London Lancet* says:

"All birds I have examined during this or former epidemics contained tape-worm. In May last I obtained

two birds, one from the neighborhood of Kirriemuir, the other from Sir Thomas Gladstone's moor, near Fettercairn. Both were in good plumage; the one was emaciated, the other in good condition. The portion of the intestine above the tape-worm was impacted with dry vegetable matter, while the lower part of the gut contained liquid yellow feculent matter. I do not know to what extent the presence of tape-worm in grouse may be consistent with comparative health, and have never myself examined healthy birds for it, but it is well known that all wild animals are liable to be infested with entozoa.

"In the winter of 1846 immense numbers of the razor-billed auk (*Alca torda*) were thrown up dead on the shores of the Firth of Forth. In all the specimens I examined the intestines contained tape-worm and other entozoa, but so familiar was I with these parasites in marine fishes and other animals, that I attributed the auk mortality at the time to the severity of the weather; but certainly neither before nor since have I seen so many of these birds cast on the shore, though there have been many more severe winters."

A STRONG ADHESIVE PASTE.—According to Fr. Sieburger, an excellent paste may be prepared as follows. Four parts, by weight, of glue are soaked for several hours in fifteen parts of water, and then slowly warmed until a perfectly clear solution is formed. This solution is then diluted with sixty-five parts boiling water and thoroughly stirred. In the mean time thirty parts of starch are stirred into two hundred parts of cold water, so as to form a thin, milky liquid, free from lumps. Into this is poured the solution of glue, stirring continually and heating. When cold, ten drops of carbolic acid are added. The paste made in this way is said to possess extraordinary adhesive power, joining leather, paper, pasteboard, etc. By keeping it in closed vessels, so that the water cannot evaporate, it may be preserved for years. Where no great strength is desired, ordinary flour or starch paste is used, a little carbolic acid being added to prevent souring.—*Journal of Applied Chemistry*.

WATER OF ALL FLOWERS.—An ancient formulary of the seventeenth century has this prescription which was to produce a "Water of all Flowers" (*Aqua Florum Omnium*). The process adopted is remarkable for its simplicity and logical accuracy:

"Send a cow into a meadow full of flowers; when she has eaten all the flowers, gather the dung, distil it, and you have water of all flowers."—*Med. and Surg. Reporter*.

SMALLPOX AND VACCINATION.—An official statistical report of the cases of smallpox occurring in the German Empire during the years 1860-71 shows that of 232,824 patients 28,539 died. The condition as to vaccination is stated in 208,793 cases: 27,793 were not vaccinated, and of these 8894, or 32 per cent., died; 181,000 were vaccinated, of whom 17,260, or 9.5 per cent., died; and 6015 were revaccinated, among whom the deaths were 445, or 7.4 per cent.

LUNACY IN MADRAS.—A report on the working of lunatic-asylums in the Madras Presidency has just been submitted to the Right Hon. the Governor in Council. Among the most interesting of its contents is the section on the cause of lunacy. Of the hundred and fifty-three admissions during 1871-72 into the Madras and Vizagapatam asylums, the probable causes of the disease were ascertained in forty-nine cases, and unknown in one hundred and four. Of the former, twelve were attributed to moral and thirty-seven to physical agencies, — “an experience somewhat at variance with results in asylums in other parts of the world.” The abuse of narcotic drugs in Bengal caused one hundred and seventy-two out of a total of four hundred admissions, or in the ratio of 43 per cent.; whereas in Madras 7.18 per cent. are ascribed to narcotics, proving that ganjah, bhang, and opium are much more frequently consumed in the north than in the south of India.

ENRICUS CORDUS, who died A.D. 1535, doubtless told his own experience, as well as that of his apostolic succession, in the healing art:

“Tres medicus facies habet: unam quando ragatur,
Angelicam; mox est, cum juvat, ipse Deus.
Post ubi curato, poscit sua præmia, morbo,
Horridus apparat, terribilisque Sathan.”

(“Three faces wears the doctor: when first sought,
An angel’s—and a God’s, the cure half wrought;
But when, that cure complete, he seeks his fee,
The devil then looks less terrible than he.”)

Pope sang in the same strain, although he was not one of the brotherhood:

“God and the doctor we alike adore,
But only when in danger, not before;
The danger o’er, both are alike requited,
God is forgotten, and the doctor slighted.”

Dr. D. Clark, Canada Lancet.

A DILEMMA FOR TEETOTALLERS.—We should like to ask the members of the legislature if they are prepared to continue the use of bread as an article of diet, in the face of the following fact, given in the *Medical Press and Circular*:

In the *Chemical News* for May 30, Mr. Bolus says that he has detected a small percentage of alcohol in six samples of new bread purchased at different shops in London. He says, “It is possible that the amount of alcohol contained in bread is too small to be of any dietetic importance, but it may perhaps be worth while to notice that forty two-pound loaves are about equal in alcoholic strength to an ordinary bottle of port.”—*Boston Medical and Surgical Journal*.

SOME time ago a Cork gentleman sold some fox-hounds to an English master of hounds. When they arrived at the kennel they were refused, as not being in accordance with their description. They were then sold by auction and purchased by a London dealer in connection with the provision-trade. An action was brought last week at the Liverpool Assizes to recover their value, and one of the learned counsel remarked that they had been made into sausages. They were described as being “lame, mangy, old, and unbroken.”

so perhaps it is as well that we knew nothing about it at the time.—*London Lancet*, Sept. 6, 1873.

PRESERVING CHARRED PAPERS.—Mr. E. H. Hoskins, of Lowell, Massachusetts, has suggested a very useful and practical way of preserving and giving toughness and flexibility to charred paper, which has proved to be of much importance in the identification and copying of valuable documents charred by conflagration, such as the recent Boston and Chicago calamities. We have seen specimens of charred papers and bank-notes, thus treated, that can be handled with impunity. The printing upon the charred bank-notes can be readily discerned. The preserving process consists, we believe, in pouring collodion upon the surface of the charred paper. The collodion forms a thin transparent film, dries in a few minutes, when the process is complete.—*Scientific American*.

COLLODION IN HORTICULTURE.—The *Gazette des Campagnes* recommends dipping the end of plant-slips in collodion before setting them out. The collodion should contain twice as much of cotton as the ordinary material used in photography. Let the first coat dry, and then dip again. After planting the slip, the development of the roots will take place very promptly. This method is said to be particularly efficacious with woody slips, geraniums, fuchsias, and similar plants.—*Boston Journal of Chemistry*.

DOCTORS ON A STRIKE.—The *Gazette Hebdomadaire* mentions a strike of medical practitioners of the Canton of Aargau, Switzerland, on account of the miserably small fees allowed them for visiting the poor. It appears that a physician is entitled to about fifteen cents for visits at a distance of nearly a mile.—*New York Medical Journal*.

MISS DR. FRANCES A. RUTHERFORD has been appointed Vice-President of the Michigan State Medical Society. Miss Rutherford is the happy possessor of a Philadelphia degree.—*London Lancet*, Sept. 6, 1873.

CALOMEL FOR PILES.—Calomel applied once or twice a day to tumid and tender piles rarely fails to cure them in a few days.—*Western Lancet*.

THIRTY-SEVEN ladies are said to have matriculated already in the Medical Department of the Michigan University.

COST OF AN EPIDEMIC.—The *London Medical Record*, April 16, 1873, states that the late smallpox epidemic cost Dublin at least £35,000.

OFFICIAL LIST

OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U.S. ARMY, FROM OCTOBER 21, 1873, TO OCTOBER 27, 1873, INCLUSIVE.

GIRARD, A. C., ASSISTANT-SURGEON.—Assigned to duty at Yorkville, South Carolina. S. O. 183, Department of the South, October 20, 1873.

MATTHEWS, W., ASSISTANT-SURGEON.—To report in person at these Headquarters for assignment. S. O. 206, Department of the East, October 22, 1873.

BYRNE, C. B., ASSISTANT-SURGEON.—Assigned to temporary duty at Wiltet's Point, New York Harbor. S. O. 210, A. G. O., October 23, 1873.

SATURDAY, NOVEMBER 8, 1873.

ORIGINAL COMMUNICATIONS.

THE TEMPERATURE OF THE SEXES; AN INDICATION OF DEVELOPMENT.

BY JOHN STOCKTON-HOUGH, M.D.

SINCE Aristotle declared that man had more warmth than woman, we have had recorded any number of assertions to the contrary, and several proofs corroborative; and yet, as late as 1864, we see the Greek philosopher flatly contradicted by a clever, scholarly naturalist:* so we find some decidedly in favor of one view, others of the opposite opinion, and still others in doubt.

Though we had full confidence in Aristotle's theory and the corroborative evidence of recent skilful observers, yet we felt anxious to test the matter, and the very satisfactory result shown in the accompanying table fully sustains the Aristotelian theory.

Aristotle held that moderation in secretion favors longevity: "this," he says, "is why females live longer than males."† "Males ought by nature to be longer-lived than females, since they have more warmth."‡ Again, "The male must necessarily be warmer than the female."§

After discussing the different qualities of the blood, and the various parts to which it is supplied, he says, "Hence the upper|| and lower parts, the right¶ and left sides, the male and female, manifest their differences" [in temperature].**

Aristotle arrived at these conclusions (deductions) from *philosophical and analogical reasoning*, not having any delicate instrument like the thermometer, while modern investigators rely upon the thermometer almost entirely. His detailed observations and philosophical deductions are without an equal in the history of science since his time, and we are not surprised that Cuvier says that "One sees that on certain points of detail he is a better observer than the majority of his successors."

Dr. John Davy, F.R.S.,†† the great anatomical

* George Henry Lewes: "Aristotle: A Chapter from the History of Science," etc., etc., Lond., 1864, p. 268 (note): "Modern investigations show that the average of life is slightly in favor of women, and that their temperature also is slightly superior to that of men." The greater longevity of women than of men is forcibly shown in the author's paper on "Longevity or the Relative Viability of the Sexes; particularly with regard to the relative liability to the inheritance of certain transmissible diseases, considered in relation to the selection of life-insurance risks, with a view of exhibiting the unjustness of the practice of charging higher rates for women," etc., etc.,—*New York Medical Record*, June 16 and July 15, 1873, pp. 297-303, 403-405.

† Confirmed in the author's article on "The Relative Viability of the Sexes," *New York Medical Record*, June 16 and July 15, 1873.

‡ De Long. et Brev. Vitæ; Lewes, Aristotle, etc., Lond., 1864, p. 268.

§ De Generat. Animal., B. iv. ch. i.

|| Aristotle (De Partibus, B. ii. ch. vii.) says, "The brain is the coldest part of the body." Compare Dr. John Davy (Res. Phys. and Anat., Lond., 1839, 8vo, vol. i. p. 157), where he says, "From the results of some observations already detailed, it would appear that the temperature of the brain is not quite so high as that of the rectum." In several experiments on sheep the brain was from .5° to 2° Fahr. lower than the rectum.

¶ Aristotle (De Partibus, B. iii. ch. iv.; also, De Generat. Animal., B. iv. ch. i.) maintained that the right side is warmer and nobler than the left. See further in the writer's paper on "The Developmental and Functional Superiority of the Right Side, and the Greater Frequency of Disease, Deformity, and Defect in the Left" (not yet published). Compare also Tamburini (La Nuova Lig. Med., March 10, 1873) on the "Functional Superiority of the Left Hemisphere" (or the brain). It is important, therefore, that the temperature should be taken on the same side.

** De Partibus, B. ii. ch. ii., Partes Similares; Lewes's Aristotle, p. 298.

†† Report of the Brit. Assoc. for the Adv. of Sci., 1864, p. 121.

and physiological investigator, has shown by carefully conducted and frequently repeated experiments that the temperature of men and of the males of some of the inferior animals is superior to that of their females.

In the human race the average is as

10.58 for males is to 10.13 for females:

from elaborate experiments,—

for males, 99° to 99½° —average, 99¼°

for females, 97¾° to 98° —average, 97.875°

Difference in favor of males, 1.375°

In the common fowl a well-marked difference was discovered in temperature between the male and female. Of six fowls the proportion was 108.33° Fahr. for the male, and 107.79° Fahr. for the female, giving a difference of .54° Fahr. in favor of the male. The maximum for the male was 108.5°, for the female 108°.

"In a large number of instances, in which comparative trials were made with much care, he found the temperature of the woman a little lower than that of the man."††

The following table of experiments on children fully corroborates this sexual differentiation:

Table showing the temperature of twenty-seven children, taken by the writer in the Obstetrical Wards of the Philadelphia Hospital, September 27, 1872, with discriminations of age and sex. (Taken in the axilla, at noon of the same day.)

No.	Ages.	Temperature in Degrees of Fahrenheit.		Average for the various periods (both sexes).
		Males.	Females.	
1.....	20 hours....	99.2	99.14
2.....	24 "	99.		
3.....	28 "	99.4		
4.....	31 " ....	.....	99.
5.....	36 "	99.1		98.53
6.....	3 days.....	99.2		
7.....	5 " ....	.....	98.7
8.....	5 " ....	.....	99.
9.....	6 "	97.6	98.17
10.....	7 "	98.3		
11.....	10 "	98.4		
12.....	2 weeks....	.....	98.4
13.....	4 "	98.5	98.09
14.....	4½ "	97.6		
15.....	7 "	98.5		
16.....	7 " ....	.....	98.
17.....	9 "	98.3		98.37
18.....	9 " ....	.....	98.2
19.....	3 months..	.....	98.3
20.....	4 " ....	.....	97.8
21.....	5 "	98.	98.37
22.....	5½ "	98.		
23.....	9 "	98.4		
24.....	13 " ....	.....	98.3
25.....	16 "	98.		98.37
26.....	22 "	97.5		
27.....	44 "	98.5		
Average.....		98.44	98.30	98.37

†† Report of the Brit. Assoc. for the Adv. of Sci., 1864, p. 121.

‡ The writer is indebted to the courtesy of Drs. Parry, Girvin, Duer, Ingham, Parish, and Potter, physicians to the hospital, for the privilege of making these observations.

The temperature of boys, ranged from 97.2° to 99.4° ; difference, 2.2° .
girls " " 97.6° to 99.2° ; difference, 1.6° .

The average temperature of
5 children aged 20 to 36 hours, was 99.14° Fahr.;
6 children aged 3 to 10 days, was 98.53° Fahr.;
7 children aged 2 to 9 weeks, was 98.17° Fahr.;
9 children aged 3 to 44 months, was 98.09° Fahr.;
Total, 27 children, average temperature, 98.37° Fahr.

Dr. John Davy, F.R.S.,* also found the variation in temperature to be greater among males than among females,† as will be seen by the following:

Three men,
from 99° to $99\frac{1}{2}^{\circ}$, mean $99\frac{1}{4}^{\circ}$; variation $\frac{1}{2}^{\circ}$.
Three women,
from $97\frac{3}{4}^{\circ}$ to 98° , mean 97.875° ; variation $\frac{1}{4}^{\circ}$.
Difference in favor of men, 1.375° .

Women, therefore, have a lower temperature than men, and it is undisputed that they have a more frequent pulse than men. Valleix‡ has shown that the pulse of infants is subject to the following law, viz.:

In new-born children the pulse is less frequent than at the age of six months; the mean frequency while sleeping was 87; but, sleep itself being a cause of diminished frequency of the pulse, it is necessary to select a somewhat higher figure as that of the normal pulse. Everything warrants the supposition that this varies in frequency from 90 to 100.

I have shown in my tabulated observations that the temperature of new-born children is higher than at the age of six months,—indeed, that it gradually declines from the hour of birth to a certain age; and, as this temperature is lower than that of adults, there must be a time when it begins to rise, probably at the approach of puberty, or even earlier.

My table shows a gradual decline in temperature for each of the periods, though they were so short and near together.

The boys had a temperature of 98.44° , and the girls 98.30° , giving a difference in favor of the males of $.14^{\circ}$.

Children, therefore, have a higher temperature and a less frequent pulse at a few hours after birth than they have at any period afterwards, up to forty-four months (the highest age taken). They have also a lower temperature and a more frequent pulse than adults of the same sex. In these particulars, as, indeed, in all others of a developmental character, women stand between children and men.

It would appear to be a law, in healthy persons at least, that wherever we find a frequent pulse we have a lower temperature, indicating a relatively lower development, and *vice versa*.

Dr. W. F. Edwards found the temperature of the young of various animals to be from 1° to 3° Fahr. and from 2° to 5° Cent. inferior to that of their parents. Among the animals under observation were

the following: pups, rats, rabbits, guinea-pigs, star-hawk, magpie, thrush, starling, etc., etc.

The following figures are the result of his experiments on man:

	MEAN.	RANGE.	VARIATION.
Twenty adults,	97°	96° to 99°	3° Fahr.
Ten infants,	94.5	93.5 to 96	2.5

He concludes that "man is therefore proved to be subjected to the same law here as animals having warm blood in general, the young of which, so far as they have been examined, and, we may presume, universally, are inferior in temperature to their parents."§

"Dr. John Davy|| found that the temperature of a lamb was a degree higher than that of its mother; and in five new-born children the heat was about half a degree higher than that of the mother, and rose half a degree more in the first twelve hours after birth."¶

This method of comparison is subject to several sources of fallacy, so far as our object is concerned; for the mother's temperature** is manifestly not the same immediately after the birth of her child as that of a healthy vigorous woman who had not had any severe physical disturbance, such as child-birth undoubtedly is; and the mere fact of lying in bed for several consecutive hours is sufficient to render the comparison useless for our purpose. We want the average temperature of a large number of healthy children in lots of the same age, same sex, and same physical and social position, as compared with an equal number of adults taken in the same manner with reference to age, sex, condition, etc. When we have all the conditions fulfilled, we will find the same results as M. Edwards, viz.: That young persons have a lower temperature and a higher pulse than adults, until we reach extreme old age, when the second childhood returns, with its physical characteristics,—a lower temperature, a higher pulse, etc.

M. Roger†† made a very extensive series of experiments on the temperature of young children in health and in disease. According to Dunglison,‡‡ he found "in nine examinations, from one to twenty minutes after birth, the temperature observed in the axilla was from 99.95° to 95.45° . Immediately after birth it was the highest, but quickly fell to near the lowest point stated above. By the next day, however, it was entirely, or nearly, what it was before. The rapidity of the pulse and respiration appeared to have no certain relation to the temperature. In thirty-three infants, from one to seven days old, the most frequent temperature was 98.6° ; the average 98.75° ; the maximum, one case, 102.2° ; the minimum, also one case, 96.80° . All the infants were healthy. The frequency of respiration had no evident or constant relation to the temperature.

‡ Cyclopædia of Anatomy and Physiology, Lond., 1836, art. Animal Heat, p. 662.

¶ Philos. Trans., 1844, p. 57.

|| Dunglison, Physiol., vol. i. p. 599.

** Dr. G. Wilds Linn, of the Philadelphia Hospital, has recently made some very valuable observations on the temperature of the lying-in woman, which will add greatly to our knowledge on this point, when published.

†† Archiv. Gén. de Méd., Juill., Août, 1844.

‡‡ Physiol., vol. i. p. 601.

* Proceedings of the British Association for the Advancement of Science, 1863.

† Of the stature of the human race Geoffroy St.-Hilaire says, "The size of women is less variable than that of men;" and this would probably be found true of other physical comparisons.

‡ Mémoires de la Société Médicale d'Observation de Paris, tome ii., Paris, 1844. Review in Med.-Chir. Rev., April, 1845, p. 390; compare also Mr. Gorham (Med. Gazette), M. Trousseau, and M. Billard.

A few of the infants were of a weakly habit; their average temperature was 97.70° ; the others were strong, and their average temperature 99.534° . The age, at this period, had no influence on the temperature, nor had the sex, state of sleeping or waking, nor the period after sucking.

"In twenty-four children, chiefly boys, from four months to fourteen years old, the most frequent temperature was above 98.6° ; the average 98.978° ; the minimum 98.15° ; the maximum 99.95° . The average of those six years old or under was 98.798° ; of those above six years, 99.158° . The average number of pulsations in the minute was, in those under six years, 102; above that age, 77: *yet the temperature of the latter was higher than that of the former and of younger infants.* There was no evident relation between the temperature and frequency of respiration; nor, in a few examinations, was the temperature affected in a regular way by active exercise for a short time, or by the stage of digestion; though 'Gierse* found that the temperature beneath his tongue was 98.78° before, and 99.5° after, an early dinner.'"

"Dr. G. C. Holland† found that the mean temperature of forty infants exceeded that of the same number of adults by $1\frac{3}{4}^{\circ}$: twelve of the children had a temperature of from 100° to $103\frac{1}{4}^{\circ}$."

M. Edwards,‡ on the other hand, found that in the warm-blooded animals the faculty of producing heat is less the nearer to birth, and that, in many cases, as soon as the young dropped from the mother the temperature fell to within a degree or two of that of the circumambient air; and he moreover affirms that the faculty of producing heat is at its minimum at birth and increases successively to the adult age. His trials on children at the large Hôpital des Enfants of Paris, and on the aged at Bicêtre, showed that the temperature of infants one or two days old was from 93° to 95° Fahrenheit; of the sexagenarian, from 95° to 97° ; of the octogenarian, 94° to 95° ; and that, as a general rule, it varied according to age.§

M. Edwards further states that warm-blooded animals, born with the eyes closed, resemble the cold-blooded animal; the latter, or those born with the eyes open, the warm-blooded. He actually found the temperature of a seven months' child, two or three hours after birth, was only 89.6° Fahr. He suggests that that of a child born in the fifth or sixth month, before the membrana pupillaris disappears from the pupil, ought to be much lower. This state of the eyes must be considered as indicative of the immature stage in the development of the animal. It would be interesting, as a further confirmation of this law, to observe the temperature and pulse in the young of marsupial animals.

Under what circumstances Dr. Holland could have found such a uniformly high temperature as 100° to $103\frac{1}{4}^{\circ}$ in children, I am entirely at a loss to comprehend or imagine. There is, without doubt, some source of fallacy in these observations, as they are at

variance with the results of all similar experiments, and opposed to all the theories hitherto propounded.

It is important to know that the sanguine temperament indicates the highest physical development, and that persons having this temperament have a larger proportion of red corpuscles and solid constituents in their blood, and a higher temperature, than persons of any other temperament, particularly the lymphatic, which latter, according to a French physiologist, accompanies physical degeneracy of the race. It is, therefore, quite possible that a woman with a sanguine temperament may have a higher temperature than a man with a lymphatic temperament. The sanguine temperament is, I believe, more frequent among men, and the lymphatic more frequent among women.

The following is a summary of conclusions and deductions arrived at from a careful study of this subject:

1. That males have, as a rule, from the beginning to the end of life, a higher temperature, and a less frequent pulsation of the heart, than females, varying, nevertheless, according to temperament, constitution, age, and condition of health.

2. That children have a higher temperature at birth, and for a short time subsequently, which, though slightly lower than that of an adult, nevertheless slowly and gradually declines to a certain point until about the sixth year of age is reached, after which it gradually increases until developmental maturity is reached, when it gradually and slowly declines again as old age (second childhood) advances.

The pulsation of the heart follows just the opposite course, being most frequent when the temperature is lowest, and least frequent when it is highest.

3. That males appear to have a greater variation in temperature than females, thus agreeing with their greater variation in stature and many other peculiarities.

4. From all of which we conclude that the woman approaches more to her condition as a child than the man does, and is consequently less highly developed. The male is a secondary evolution from the female.||

2003 WALNUT STREET, PHILA., September 29, 1873.

IS THE PRESENCE OF THE HYMEN A PROOF OF VIRGINITY?

BY CHARLES W. BROWN, M.D.

I PRESENT the following case to your numerous readers as a rare one, and also to show the value of an unruptured hymen as proof that rape has not occurred:

|| See further on this theory of development in the author's papers on "The Relative Viability of the Sexes," etc., etc., New York Medical Record, June 16 and July 15, 1873, pp. 9; also, "Longevity and other Biostatic Peculiarities of the Jewish Race," N. Y. Med. Record, May 15, 1873, pp. 241-5; also, "The Laws of Transmission of Resemblance from Parents to their Children," New York Medical Record, August 15, September 15, October 15, and November 15, 1873, pp. 15; also, "Statistics relating to Births, Deaths, Marriages, and Movement of Population in Philadelphia for the Eleven Years ending 1871," Penn Monthly, September, 1873, and Papers of Social Science Association of Philadelphia, 1874, pp. 24; also, "The Physical Aspects of Primogeniture," New York Medical Record, December 15, 1873; also, "Effect of Nationality of Parents on Fecundity and Proportion of Sexes in Births," also, "Observations on the Relation between Development and a certain Abnormal Condition of the Flowers of Zea Mays;" also, "The Proximate Cause of Evolution" (not published).

* Dunglison, *op. cit.*

† An Inquiry into the Laws of Life, etc., Edinburgh, 1829.

‡ De l'Influence des Agens, etc., p. 436, Paris, 1826.

§ Dunglison, Physiology, vol. i. p. 600.

October 10, 1873, I was called to see Mrs. W., aged 26; found her pregnant, full time, and in early stage of labor. She was very much frightened, and told me her child could not be born, as there was "no opening, and never had been." Upon examination, I found the hymen intact, and quite firm and rigid. Towards the lower part of the membrane I found a small aperture less than one-quarter inch in diameter. The parts were excessively tender, and it was with difficulty that I could introduce the tip of my little finger. In this way I commenced the dilating process by gentle but steady pressure until I could introduce the tip of the first finger. By keeping up this process for two hours I could with difficulty introduce the first and second fingers. I found the os had not dilated any, and was rigid. Gave patient a full opiate, and saw her again in three hours; found the os in a more dilatable condition, and pains increasing. The patient being a slender small woman, the pains did not increase as they should; but after administering quinia, alcoholic stimulants, etc., the pains came more regularly and with more force. At the end of ten hours the head was resting in the lower strait, and the pains did no good; the cranium of the child being hard and unyielding, the pains were growing weaker. I then gave ergot, with but very little effect. In two hours more I applied the forceps, and in a short time she was delivered of a large healthy female child; and in the course of half an hour the placenta was delivered, patient being in a very comfortable condition. She recovered without any unfavorable symptoms, but without any lacteal secretion. About eighteen months since, she had an abortion at about the second month; she was treated by Dr. E.; the fœtus and membranes passed off through the small opening in the hymen, and she made a good recovery.

I think I have never read of a case becoming twice pregnant with the hymen intact.

MANSFIELD, TIOGA CO., PA.

NOTES OF HOSPITAL PRACTICE.

UNIVERSITY OF PENNSYLVANIA.

SERVICE OF DR. H. C. WOOD,

Clinical Lecturer on Diseases of the Nervous System.

Reported by Dr. LOUIS STARR.

EPILEPSY ARRESTED BY STOPPING AURA—SIMULATED NOCTURNAL EPILEPSY—EPILEPSY WITHOUT LOSS OF CONSCIOUSNESS—EPILEPTIC DELIRIUM.

IT is difficult to give a correct definition of epilepsy, as different types of it are met with: it will be better, therefore, to lay before you a typical sketch of the disease, and then show how it varies. The affection is made up of a series of paroxysms which occur at irregular intervals. Each attack begins with an *aura* starting in some distant part of the body, as in one of the fingers or in the foot, and extending upward: when it reaches the head, a loud shriek is given, and the sufferer falls unconscious; as he falls, the face becomes deadly *pale*, and the body rigid, being in a state of tonic spasm. This condition lasts but a few seconds, and is hence often overlooked. The convulsion next becomes clonic,—that is, the muscles are forcibly contracted and

relaxed in rapid succession; the face is now turgid and distorted, the head, trunk, and limbs are jerked about with violence, the tongue is protruded and wounded by the teeth, and blood-stained saliva runs from the mouth. The clonic spasm rarely continues over six minutes, and usually not more than three or four. Paroxysms of such character and duration may either be single or a number of them may occur in quick succession; when they are over, there is total unconsciousness of what has happened, and very often deep sleep; on waking from this the attack is ended, to return again after a longer or shorter time. At first the mind is clear during the intervals, but grows less so as the disease advances. These points are well illustrated by the case before you. The patient is thirty years of age, a bar-tender by occupation, and for the past six years has been intemperate and excessively addicted to venery. Although much exposed, he has never had any venereal disease. Three or four years ago he began to have epileptic attacks coming on during sleep: these occurred frequently, sometimes once every night, at other times only once in two or three weeks, and were often accompanied by seminal emissions. At present, according to his own statement, he copulates from once to four times daily, and drinks in the same proportion; he has never had an attack during coition, but on several occasions some hours after the act. The paroxysms begin with pain in the stomach, and a sensation in the ring-finger of the left hand like that produced by the faradaic current: this quickly passes over the whole hand, and then up the arm, which is moved about violently during the passage; when the aura reaches the head he becomes unconscious. The duration of each fit is short, and as soon as it is over he falls into a heavy sleep, from which he wakes with a severe headache. The attacks can be stopped by grasping the left wrist firmly or by rubbing the left hand when the aura is first felt: this he always does in the daytime; at night, however, he rarely wakes up soon enough, for after the aura has passed the wrist it cannot be arrested. On this account the great majority of the paroxysms have taken place at night.

The word *aura* means air, and is used because the sensation which precedes the epileptic seizure sometimes resembles that produced by a draught of cold air running up from the part first affected towards the cerebral centres. There are three forms of aura: the sensory, the molar, and the stomachic. The first, so called from its being manifested by some abnormal sensation, as heat, cold, or formication, is very rapid in its course. The feeling of a cold breath creeping through the system, from which the term *aura* is derived, belongs to this class, but is hardly ever met with. The second variety of aura is distinguished by either convulsive movements or paralysis, starting in distal portions of the body and extending upward; while the stomachic form consists of pain or other unusual sensation beginning at the pit of the stomach, exceedingly swift in its transmission, and most frequently observed in females. If the aura can be checked in its course, the paroxysm is prevented; at the same time, it must be remembered that it is often far too quick in its passage for this to be done, and that there are many cases in which aura does not exist. In the man before you the aura belongs to the sensory class, and is probably of centric origin. This question of origin, whether central or peripheral, is a curious one, and one upon which proper treatment depends: care should therefore be taken to investigate it, though such investigations are by no means always successful.

Epilepsy may be due to hereditary tendency: so universally is this accepted that Frank reports that it was an old Scotch custom to castrate all epileptics, in order that the race might die out. Nervous diseases—for

example, hysteria, epilepsy, and insanity—are very closely related, and often alternate in successive generations. Other causes are acute diseases, exposure to the sun, and organic disease of the brain, or it may arise spontaneously, apparently without cause. In this patient it is evidently due to excessive vena. The first indication in treatment is to remove the cause, when it can be determined: until this is done, little benefit may be expected from medicines. In bromide of potassium we have a valuable remedy: its mode of operation is to lessen reflex actions and the excitability of the nerve-centres; but in order to accomplish this it must be given in full doses (3j t. d.) and increased until some effect is produced,—that is, until the blood has, as it were, become super-saturated with the salt. Notice should be taken of the fact that bromide of potassium is useful in proportion as the paroxysms are frequent, violent, and fully developed, being much less so in the various modifications of the disease. Next to the bromide in point of utility may be mentioned belladonna and nitrate of silver,—the former being given in sufficiently large doses to produce slight dryness of the throat, and the latter in doses of one-fourth to one-half a grain, continued for some time, always bearing in mind the danger of producing discoloration of the skin: this may be avoided by discontinuing it for several weeks after it has been taken for six or eight weeks, especially if iodide of potassium is used in the interval.

The man before you has his attacks in the night, but only because in the daytime he always arrests the paroxysm. There is, however, a form of epilepsy—"night-epilepsy" so called—in which the paroxysms occur only at night: they may be violent, when they are easily recognized; they may be so insidious as not to be suspected by the sufferer, and only to be discovered by the physician after the most careful search. When, however, in an adult, complaints are made of a feeling of apparently causeless malaise, with confusion of thought and headache on getting up in the morning, always be on your guard, and if the tongue is bitten and the urine voided in bed at night an almost certain diagnosis of "night-epilepsy" can be made. Of course the diagnosis of epilepsy should not be given hastily, as the prognosis is so frightful; yet, though you hold your peace, never be deceived in these cases, especially since very frequently a full dose of bromide at bedtime every night will arrest the disorder.

Wetting the bed at night is one of the most characteristic symptoms of this form of epilepsy, and its presence or absence should influence very greatly your decision. Not long since I was consulted by a distinguished practitioner, who feared that he was suffering from this affection, but in whom I was able to make a more favorable prognosis, which so far has been verified. Some years before, he had broken down from overwork, and, although he had in great measure recovered, had never regained his normal mental vigor and power of work. He had noticed for some time that his tongue was bitten on getting up in the morning, and he was partially conscious of the fact, or had the idea, that the injury occurred just at waking. He had never wetted the bed, had never suffered from any mental disturbance or malaise after the biting of the tongue, had never suffered from "petit mal" or any form of diurnal epilepsy. I therefore told him I did not believe he had nocturnal epilepsy. Still, the fact of the bitten tongue remained. Knowing that he had suffered at the time of his break-down a slight paralytic stroke, I suggested that perhaps one side of the tongue had remained less sensitive than the other, and that, lacking this guide to its movements, it sometimes got between the teeth and was bitten, especially in the first movements of waking, when the senses are all benumbed with sleep. Examination showed this to be the case; and he also stated that the

injury was always on one side of the tongue,—namely, that in which the sensation was impaired. Now, if these two points had escaped observation, much doubt might have been felt as to the nature of the case.

In *petit mal*—the second variety of the disease—there are no convulsions, and the loss of consciousness is of such short duration that the muscles remain contracted and there is no fall.

I do not propose to say much to-day about this *petit mal*, but merely to allude to a rare and very serious form of it, in which a paroxysm of delirious fury replaces the usual momentary simple loss of consciousness. This delirium is furious in character, very often homicidal. Generally there is a marked destructive tendency, or the patient fights those around him, under the delusion that he himself is being attacked. The celebrated alienist Dr. Gray was some time since sitting at a table with a lawyer who had suffered from *petit mal*, when the latter attacked him with a knife, intent upon his life. The case whose history follows presents itself to us for diagnosis. The point to be determined is whether the man has or has not had a paroxysm of epileptic delirium.

Joshua H. C., æt. 42, white, has always enjoyed good health. About three weeks ago, having been exposed to much cold and wet in his occupation (that of a car-driver), he took a severe cold, which kept him at home for three or four days. At this time there were no epileptic symptoms. After this he felt well until last Sunday morning, October 26, when he went out to walk, very thinly dressed, although the day was quite chilly. On returning to his home he had a severe chill, and complained of dimness of vision, lasting about three-quarters of an hour, with frontal headache and vomiting. His friends say that after this he was wildly delirious, doing peculiar things, seizing and hugging his wife, rushing around the room, yelling, etc., etc., but not offering violence to any person, and showing no destructive tendencies whatever. It should be mentioned that he has always been nervous and excitable, and that the night before this attack he had had a domestic quarrel.

Under cupping to the back of the neck, the man recovered his reason in about twenty-four hours.

In many respects this case is obscure. At first sight it resembles epilepsy. But there is no history of wetting the bed, or of other indications of night-epilepsy,—of momentary loss of consciousness, or other indication of *petit mal*; and the delirium was unlike the usual form of epileptic furor in that it was not directed to the destruction of any object, either animate or inanimate. Cantharides, Indian hemp, or atropia, when taken in sufficient doses, might produce similar symptoms; but this man has not taken them. It cannot have been meningitis, for there was no fever; nor was the attack malarial,—although I have seen pernicious fever with very similar symptoms,—for the chill has not returned; nor is brain-tumor the cause, since, although sudden symptoms may come from such cause, yet there are generally apoplectic symptoms, and indications of paralysis exist in a greater or less degree somewhere. Moreover, the patient has not had any marked headache. I think the case, being none of these, is probably *mania transitoria*, which often occurs after chronic diseases, great anxiety, and the like, and which in many respects is closely allied to hysteria. In the case now before us it was probably induced by exposure to cold and by the excitement of a domestic quarrel.

In the third and last variety of epilepsy there is no loss of consciousness. This form is very rare, and even the possibility of its occurrence has been denied by many authorities, who hold that unconsciousness is the only symptom of epilepsy that is never absent. The following history shows that this form may be met with. Thomas —, æt. 20, began to have epileptic fits nine years ago.

The paroxysms from the outset have been frequent, from one or two every week to three or four daily. They are always preceded by a well-marked aura, originating in the feet and passing upward; when it reaches the arms the convulsion begins. This affects both arms, the muscles of the upper part of the back, and those of the neck. During the spasm the pupils are widely dilated, the face is congested and disfigured, the head is drawn to the left, and the arms are lifted above the head and jerked wildly about. The attack lasts about thirty seconds; there is no loss of consciousness, and he does not fall. He had an attack at one of his visits to the dispensary; so that the truth of his statement as to the loss of consciousness can be fully verified.

From March 10 to July 10 the treatment adopted was, first, large doses of bromide of potassium, then belladonna with nitrate of silver, and, finally, bromide of sodium; and, although the paroxysms appeared at times to diminish in frequency, no great improvement was brought about. Since July 4 he has not been seen, and most likely he has applied for aid elsewhere; though it is hardly possible that anything can be done to give him permanent relief.

This case, I think, must be considered as of the nature of epilepsy, from its commencing with aura, its paroxysmal nature, and its intractableness. If you use the term *cerebral epilepsy* for that form of petit mal in which consciousness is not lost, you may speak of this form, in which consciousness is preserved but convulsions occur, as *spinal epilepsy*.

PENNSYLVANIA HOSPITAL.

SERVICE OF DR. T. G. MORTON, SEPTEMBER, 1873.

Reported by DR. D. DAVIDSON.

GUNSHOT-WOUND INVOLVING THE STOMACH.

CASE I.—*Post-mortem.*—This specimen was removed from a man aged 21, brought to the hospital in September. A few hours before admission he was struck by a small ball, which entered an inch below the arch of the ribs, in front and on the left side. Considerable blood was vomited immediately after the injury; intense pain and prostration were prominent symptoms; the pulse was feeble and quick. Magendie's solution in fifteen-minim doses was freely given by the skin. The following day his condition was the same, except the advent of tympanites; and large doses of morphia were constantly given, to relieve pain. On the third day there was marked peritonitis, and death occurred on the fourth day. On examination we find that the bullet pierced the abdominal walls about three inches below the ensiform cartilage and one inch on the left of the median line, passed somewhat downwards and to the left side, cutting through the border of the left lobe of the liver; its course was then traced through the anterior and posterior walls of the stomach; passing backwards, the eleventh rib was fractured, and the ball was found imbedded in the quadrate muscle.

The abdominal viscera are more or less agglutinated together by recent lymph.

In a case like this, the treatment consists simply in giving powerful opiates and supporting the patient; there is never any use in probing for the ball in wounds of the viscera, for it is not the presence of the ball, but the injury the ball has inflicted in its course, that does the damage.

STRICTURE OF THE ŒSOPHAGUS.

Case II.—This negro presents himself for examination; he is only 50 years of age, although he looks much older; we see that he has suffered severely; he is greatly emaciated. He states that his health was per-

fect until two or three months since, when he experienced a constriction or choking sensation in swallowing; he has rapidly grown worse, and now is unable to swallow any kind of food; even a few drops of water give intense suffering. These symptoms indicate a stricture, and may have been produced by the lodgment of a foreign body in the œsophagus; but the patient has no recollection of any such accident. On examination, we find no enlargement of the throat glands of the neck; there is no arterial tumor pressing on the passage: we therefore suspect, from the rapid wasting of the patient, his age, and the quick development of this disease, a growth probably carcinomatous.

In order to ascertain the location of the stricture, I introduce the ordinary stomach-tube, and find about eight inches from the mouth an obstruction so obstinate and sensitive that I am unable to carry the instrument beyond it into the stomach. There is unquestionably a stricture, which is probably cancerous. Since we cannot dilate the constriction, we advise the patient to be fed by the rectum with concentrated food, and three times a day we shall give him ten grains of the iodide of potassium by injection. Gastrotomy might be performed, but the patient is too feeble for us to recommend such an operation.

[The above patient died in September, and on a post-mortem examination a dense scirrhus growth was found encircling the œsophagus midway between the stomach and the pharynx. Dr. Richardson, the pathologist, reports that "the tumor is seated between the bifurcation of the bronchi and the œsophagus (the latter of which it surrounds and constricts), 'cries' under the knife when cut, and yields on scraping an abundant milky juice. Under the microscope this juice exhibits an immense variety of oval, caudate, spindle-shaped, and multangular cells, many of them with two or three large nuclei, and a few showing the characteristics of *mother-cells*. Thin sections from the neighborhood of the incision display a rather firm stroma, with moderately thick trabeculae, in the meshes of which the lawlessly-growing cells are arranged in groups, without any intercellular substance between the individual elements. The specimen is, therefore, one of *scirrhus cancer*."]]

TRANSLATIONS.

ENCEPHALIC SOFTENING IN THE NEW-BORN.

By M. J. PARROT. Translated from the *Archives de Physiologie* for January, March, and May, 1873.*

By FRANK WOODBURY, M.D.

THE author shows from the bibliography that this subject is comparatively new, very few of those writers who are in the best position to discuss it having referred to it; even these mention it in such an incidental manner as to show that they have failed to clearly separate it from post-mortem change. The article is based upon personal observation of twenty-eight cases occurring in premature births and infants (the oldest of which was thirty-six days): these are quoted under the different subdivisions of the special pathology of the subject, which are taken up consecutively, as follows:

Pathological Anatomy.—In the *normal* condition the dura mater of the new-born adheres strongly to the

* The article is here condensed, and the description of cases omitted, for which the reader is referred to the original, of which this is an abstract rather than a translation.—F. W.

calvaria and is removed with it. The meninges are easily detached from the convolutions, which are much less clearly defined and have comparatively less depth than in the adult. The brain-substance itself is soft, friable, and in consistency and color resembles freshly-curdled milk slightly tinged with coffee. It is deficient in white nervous substance and neuroglia, but contains a multitude of cells surrounded by protoplasm. This description applies more particularly to the hemispheres, the other portions of the encephalon being in a more advanced stage of development. There is another particularly important point in the structure of the cerebrum: it is the existence, among the elements mentioned, of fatty granules grouped around the cells of neuroglia, where they are sometimes so numerous as to form a true granular body. These are most frequently seen in the corpus callosum and periventricular region of the lateral ventricles. In the normal condition these masses of fatty molecules are always isolated; they are also found in the nerve-tubes before they are fully developed, but not after. The presence of fat, then, in the brain is an indication of its imperfect condition.

The molecules of the brain-substance being so feebly united, we can easily understand that the encephalon yields readily to influences which tend to diminish the cohesion of those particles. These influences are of two kinds: morbid, acting during life, and physical, coming into play only after death.

Post-mortem change is indicated by the odor of sulphuretted hydrogen, by the general softening, and by section, which exhibits numerous grayish opaque spots the size of a pin's head, composed of vibrones. In these cases softening generally is found in the other viscera. These results are more marked when the brain has previously been the seat of disease.

Pathological softening is of two kinds, requiring separate description. The first is the more frequent and clearly defined, but, at least to our knowledge, has not been described by any author (we except M. Virchow). This we will call *multinodal white softening* (*ramollissement blanc à foyers multiples*). It is intimately connected with, and forms the ultimate stage of, fatty degeneration. The fat, when in considerable quantity, is aggregated in white patches and intersperses apparently healthy tissue. These patches contain centres of softening, and exist almost exclusively in the centre of the hemisphere near the lateral ventricles, into which they never penetrate, being separated at least by the lining membrane. Outside of the patches is diffuse interstitial fatty deposit, and the vessels, especially at the periphery, are markedly congested.

The other variety is *red softening*. On making a section of the hemispheres, the cerebral material in their centre, to a greater or less extent, is found to be converted into a reddish-violet pulp interspersed with dark points and tracts which are vessels filled with coagulated blood. The surrounding region is much congested, and sometimes exhibits capillary hemorrhage. Like the preceding lesion, it never invades the lateral ventricles during life. In most of the cases examined there was found a thrombosis of the entire encephalic venous system; the veins being sometimes surrounded by a yellowish exudation, which, infiltrating the arachnoid, formed opacities of variable extent. In this red softening we also find fatty degeneration, which rarely, however, is in such quantity as to produce patches. This, however, might easily occur, as it is simply a question of degree, although it was not met with in any of the detailed cases. Thus the two kinds of softening, although varying in some of their conditions, are identical in their pathology.

The condition of some of the other organs merits attention. The oldest or primary lesions affect the

upper part of the digestive tube. Muguet extends sometimes as far as the gastric mucous membrane, which contains numerous ulcers of very small diameter. The other lesions resulting from this are alterations of the blood and of different viscera. The blood is less abundant than in health, and shows enlargement and disposition to concretion of the globules, not only in the brain, but elsewhere. In the lungs congestion and centres of inflammatory hardening are rare, but emphysema often exists, with fatty infiltration of the alveolar epithelium. The heart shows some fatty change, which also affects the renal tubules. The visceral fatty degeneration differs in degree in different cases, but is always indubitable evidence of impaired nutrition.

Symptomatology.—In twenty-three of the cases we noted occasional signs of brain-trouble, but they were fugitive and showed nothing characteristic. In seven only did it take the form of well-defined convulsions; but whether this was due to the softening remains to be seen. In the mean time we declare that in those patients where the softening was the consequence of fatty patches there was nothing that could give a hint of its existence.

A fact worth noting is that the temperature was not elevated above the normal, even in a case complicated with meningitis. The radial pulse did not exceed 136.

Etiology and Nosogenesis.—The cases were nearly equally divided as regards sex. The oldest was 36 days, and in some the ossific centre in the femur was either absent or smaller than in infants at term. The season of the year exercised little or no influence upon the disease. Digestive troubles were the usual complications; since in nineteen out of twenty-three cases they were the first symptoms, and ceased only with death.

But in order to understand the morbid connection it is indispensable to distinguish the two kinds of softening. We find the white softening, which is the most frequent, constantly among infants suffering from inanition, because this has for its point of departure gastro-intestinal troubles or accompanies anasarca, as a consequence of the native weakness which is the most constant cause of the œdema of the new-born. In a previous paper we proved that inanition engendered fatty change in the brain.*

In seven cases we found red softening, in five of which clots were found obstructing veins of the brain and dura mater, with or without an exudation of leucocytes around the vessels. It is easily seen how the red softening is produced. The occlusion of the veins obstructs the local circulation, causing distention of the capillaries and a transudation of serum; this imbibed by the brain-substance reduces its consistence, to be still further diminished by mixing with blood extravasated by rupture of some of the minute and poorly-nourished vessels. The venous thrombosis is undoubtedly due to an alteration in the blood, because the same condition is found in the kidneys and sometimes in the pulmonary arteries. Following the troubles of digestion and nutrition, the blood loses its serum and becomes thickened; this consistence and the defective impulsion of a feeble heart produce a notable slowing of the circulation. The leucocytes, relatively or absolutely increased, aggregate along the vascular walls, and there form a mass which is a point of departure for thrombosis. In fact, we saw that certain of the venous clots were entirely composed of leucocytes.

Pathology.—In only six of the cases were there unmistakable convulsions, and these were dissimilar. In each of these additional causes were present which might account for the phenomena; such as meningitis, disease of the cerebellum, or renal thrombosis. In one

* Sur la Stéatose viscérale par Inanition chez le Nouveau-né, in Comptes-Rendus de l'Académie des Sciences, 18 Août, 1868.

of the cases the child was evidently an idiot, which we will merely mention here, reserving its discussion for another article, in which cases of idiocy will be considered whose cerebral lesion is connected with that discussed in the present article.

Encephalic softening may exist beyond the point of infancy without losing the characters above shown. It is found in the foetus and in children of several months or even years, in which case its début is difficult to fix, but is probably not far from birth. Some of these cases had a serous effusion distending the lateral ventricles, due to the brain-softening, which was entirely unsuspected during life.

In twenty-three cases the disease remained, so to speak, latent. In reflecting upon the semeiology of this affection, we are forced to the conclusion that the lesions of the cerebral substance proper, however extensive or pronounced they may be, only in an exceptional manner exhibit themselves by appreciable phenomena.

The studies we have just made would be devoid of value to general pathology if we did not in the same connection consider the cerebral softening of different epochs of life, in order to point out their analogies and differences. Why does it occur most frequently at the two extremes of life? What causes concur in the aged and in the new-born?

In senile softening we find a uniform lesion, clearly circumscribed, occupying indifferently the periphery, centres of the hemispheres, or the ganglia, and, when it has existed sufficiently long, establishing a kind of cicatrization and provoking secondary atrophy of the neighboring structures. Very unlike this is the lesion in the new-born: in almost all the cases the disease is limited to the hemisphere proper, affecting symmetrically its medullary centres, only invading the convolutions exceptionally and when the disease is old. The lesion may be diffused or in small but numerous spots. The patient rarely survives long, but even in such cases we do not meet anything resembling the yellow patches or cellular infiltration of senile softening. The altered nerve-substance is gradually absorbed, and the resulting void is filled by serous exudation. Finally, secondary degenerations are rare.

Clinically the difference seems still greater, since in the new-born the lesion is latent and cannot be diagnosed, whilst in the aged it manifests itself by striking and ordinarily characteristic symptoms. In the pathogenesis the dissimilarity is no less marked, for in advanced age the point of departure of the softening, except in rare cases, is in the obstruction of the arterial system by atheroma, thrombosis, or embolism; whilst in the first days of life it is in the blood, whether it acts directly by the formation of clots or by nourishing insufficiently the nerve-substance.

If this comparison exhibits many points of difference, it is because we have so far only examined the details, whereas if we seek the source of the malady we will find it to be the same in both cases.

In short, the arterial or cardiac lesions which in the aged produce thrombosis or embolism are the consequence of the inevitable defects of nutrition which are entailed on long life. In the new-born it is also a profound disturbance of the nutritive process which, through the blood, induces the disintegration of an organ of which time has not yet corrected the natural softness.

The points of pathological anatomy and pathogeny to which this memoir is devoted having only been glanced at by former writers, and as these are based on personal observation, we believe we may regard this as an original work, and consider the following propositions as hereby established:

1. The encephalon of the new-born is normally ex-

ceedingly soft, because cells abound in the reticulum, and the true nerve-elements, particularly the tubes of myeline, exist in very small proportion.

2. Predisposed in this way, softening is easily produced during life from pathological, and after death by physical, influences.

3. Post-mortem softening is distinguished by the odor of sulphuretted hydrogen, and the whitish-gray spots, full of vibriones, generally caused by a tardy autopsy, and an elevated temperature.

4. Pathological softening is of two principal forms:

a. Multinodal white softening, connected with fatty brain, of which it is the last stage, which has its seat almost exclusively in the centres of the hemispheres.

b. Red softening, which invades the same regions, but to greater extent, and is accompanied by capillary hemorrhage.

5. These two kinds of softening, which ordinarily exist apart, may co-exist.

6. Other lesions frequently accompany, and are intimately connected with, the preceding.

a. Intra-cranial,—old clots in the sinuses and veins of the pia mater, with a sub-arachnoid and peri-venous yellowish exudation, consisting of leucocytes and granules of protein.

b. The blood and different viscera are affected, especially the digestive tube.

7. Inanition is the usual and most certain cause of new-born encephalic softening.

8. In the majority of cases the brain-symptoms observed during life were uncertain, and in no case could a diagnosis be made from them.

9. Encephalic softening of the new-born may be observed with all its phenomena in the foetus and in infants of several months, but in the latter case its début dates back to a period near to birth.

10. When the lesion is old and extensive, it may produce—

a. Secondary degeneration of the pons Varolii, medulla, and spinal cord.

b. An intra-cranial effusion, with or without development of hydrocephalus.

11. Encephalic softening is very frequent at the two extremes of life; and, whatever points of undeniable dissimilarity exist in the lesion itself and the symptoms, its first cause appears to be identical, and consists, in the new-born as in the aged, in a *failure of nutrition*.

GLYCERIN OF BORAX IN FACIAL ERYSIPELAS.—Prof. D. M. Salazar, of the Hospital Nacional, Madrid, reports that he has cured eight cases of facial erysipelas in forty-eight hours by this remedy. Notwithstanding the rapidity with which the affection disappeared, there were no consecutive pathological affections. In one case the disease had existed three days before treatment was commenced, and there were bilious vomiting, intense cephalalgia, high fever, inflammation of the entire face, and some phlyctenulae in the vicinity of the right lower eyelid and the root of the nose. He applied the solution to the diseased parts with a brush, and then covered them with a mask of raw cotton. After twenty-four hours all the symptoms, local and general, were notably diminished, and the next day all the phlyctenulae had disappeared and desquamation was commencing.—*El Amfit. Anat. Españ.*, March, 1873.

FORMULA FOR CORYZA.—

R Pulv. cubeb., ʒij;

Pulv. cupri sulph., gr. ij.—M.

In one box. Snuff up a small pinch about every two hours till relieved.—*Thomas Barrows, M.D., in Medical and Surgical Reporter.*

PHILADELPHIA
MEDICAL TIMES.
 A WEEKLY JOURNAL OF
 MEDICAL AND SURGICAL SCIENCE.

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EDITORIAL.

PROFESSIONAL ADVERTISEMENT.

THE idea or theory upon which the modern practice of advertisement is founded, we take to be this: John Jones has something that Joseph Smith wants; but if Joseph Smith does not know who has the article, John Jones can't get rid of it. Hence John advertises to let Joseph know where to find what he wants.

This is the original idea of advertisement. But of recent times traders have gone a step beyond it, and advertise for the purpose of creating a want in buyers,—and, undoubtedly, do so with success. Joseph has been contented with his old pantaloons, or with his worn entry oil-cloth, but is moved to discontent by the skilfully-worded paragraphs of John, and a new pair of pantaloons, or, perhaps, a “wooden carpet” or tiled floor, can alone still the unrest in his bosom.

All this may be well,—may make business lively. We have no concern with this: the question of interest to us is, How far is it proper or expedient for the profession to use the methods of trade? Seemingly, there is nothing wrong in Dr. Brown's telling his neighbors through the columns of the daily paper that if they wish his services they can have them. The trouble seems to be that if the doctor does this, the temptation to do more is such that average medical human nature can't resist it. Dr. Brown will very innocently tell his neighbors that he has paid especial attention to diseases of the

genito-urinary organs; has been educated under Sir William this, or that, abroad; studied in this or that hospital: all true, perhaps, but very demoralizing for a man to publish of himself. He who commences in the most hesitating plaintive tones to blow his own trumpet in the public press will, by-and-by, end in a brazen blast rivalling that which shook the walls of Jericho.

This is human nature. Well, therefore, does the code of the American Medical Association read,—

“§ 3. It is derogatory to the dignity of the profession to resort to public advertisements, or private cards or handbills, inviting the attention of individuals affected with particular diseases,—publicly offering advice and medicine to the poor gratis, or promising radical cures; or to publish cases and operations in the daily prints, or suffer such publications to be made; to invite laymen to be present at operations; to boast of cures and remedies; to adduce certificates of skill and success, or to perform any other similar acts. These are the ordinary practices of empirics, and are highly reprehensible in a regular physician.”

It is evident, however, that in some way or other a physician must be known before he can be employed. Of course the chief way in which, in the generality of cases, the reputation of a physician grows is by the word of mouth of his patients. There are, however, various indirect methods of advertising, some of which are not only legitimate and honorable, but, from the nature of the case, unpreventable. A portion of the value of positions in hospitals, medical schools, and other public institutions arises from the advertisement which they give to those who hold them,—endorsing them before the public as men of skill and attainments in their profession. Again, writing is a method of indirect advertisement. Articles in medical journals, medical monographs, and other works, of course publish their authors primarily and chiefly among the profession, but to a certain extent also among the people.

The value of such indirect advertisement is shown by the bitter controversy which has recently taken place in London in regard to the propriety of professional men “making known in a genteel way” that they are the authors of works on especial subjects in medicine. It has been the custom in the city named, when a physician writes a work on this or that specialty, to advertise the book extensively in the *London Times* and other secular papers, and even to put out placards of the same in the streets, ostensibly for the purpose of selling the book, really with the design of making the public aware that Dr. Jones is authority as an aurist, oculist, chiropodist,

or what may be. Now, the Council of the London College have recently condemned this proceeding, prohibiting the members from advertising their books in this way; and their action has given rise to some plain talking. It has been freely asserted that the established physicians who constitute the Council, desiring to maintain the undisputed possession of their respective cocklofts, have kicked away the ladder up which they have climbed. One "medicus" asserts that to stop advertising his books would "retard his advance in practice ten years, and keep him starving," and pointedly calls attention to the fact that the works of Mr. Curling, President of the College, have been advertised to such an extent as to make Curling and testis household words in the community, and consequently to establish their author. Another correspondent alludes pleasantly to the circumstance that the London *Lancet*, which has strenuously upheld the Council, placards the railway stations with the titles of communications on "Tumors of the Womb," "Rectum," and other subjects generally supposed not to offer edifying reading for mixed companies of ladies and gentlemen. The upshot of the controversy, so far as can be judged at this distance, will be that authors will sell their works to publishers, with the secret understanding that they shall be advertised, and then defend themselves before the College as having no control over their books. Indeed, the defence offered for the president in the matter already alluded to seems to us to amount to this.

In this country this avenue to practice has as yet scarcely been opened, even as a corduroy road. A mine that has been worked and found to contain golden ore is writing for popular magazines articles on subjects so closely allied to medicine as to put their authors in a favorable light before the public. This practice is certainly not to be condemned altogether. If a physician have anything new to say that the public ought to hear, and can say it well enough to command attention, it is his duty to say it; but any one who is anxious to preserve absolutely unspotted his record before his fellows will remember that he is treading on dangerous ground, and mind very carefully his steps, so as to avoid even the appearance of evil,—will take care that his articles show that he has a message to deliver, and is not simply writing for personal aggrandizement.

Courts of justice have afforded some physicians first-rate opportunities for displaying their charms; and, whilst our profession has been honored by the modest knowledge and wisdom of such men as Dr. Ray, it has been no less disgraced by the per-

formances of others. If the published accounts be true, in a neighboring city, not long since, leaders of the profession belittled themselves and their associates by a so-called "public exhibition of anæsthesia;" an exhibition out of which, apparently, could come only one good,—the advertisement of the performers. "As the old cocks crow the young ones learn." The legitimate results of sowing such seed, it seems to us, will be a crop of public performances in surgery, dissections, physiological experimentation, lectures on marriage, health, disease, sexual life,—one and everything that can attract the crowd; performances that have hitherto been considered among the perquisites of abandoned quacks.

Space is wanting for a further discussion of these general points: indeed, such discussion seems unnecessary. It is so evident as to be trite, that there are proper and justifiable—nay, inevitable—methods of indirect advertisement,—advertisement that will largely aid in leading to fortune. Now, it is almost equally evident that these paths are especially open to the favored few who, by ability or culture, are fitted to be leaders, and to those who, by large social, religious, or other influence, can obtain public positions. Taking these assertions as truisms, remembering the qualities of human nature, the deduction is inevitable that, unless great care be exercised, these indirect advertisements will slowly but surely undermine the good feeling and the high tone of our profession. For, if those less favored in obtaining wide-spread publicity are to be content, it can only be by the exercise of the most scrupulous care on the part of the more favored. If the humble Dr. Jones finds that his patients are attracted by the baits and caught in the nets most skilfully spread by the aristocratic Dr. Smith, whose clinics he attends at the public hospitals and under whose presiding he sits at the medical societies, surely under these circumstances Dr. Jones were more than human if he did not conjure his brains to find out some plan by which he too could gather fishes; and, being less favored than Dr. Smith by position and ingenuity, he will probably employ more clumsy, less plausible, less indirect methods of making himself known, and thus the process of deterioration will commence.

We suppose it will not be disputed that the medical profession in Philadelphia has in the past been pre-eminently conservative, pre-eminently high-toned. It is more comfortable to remain in the belief that our good qualities are being handed down from sire to son than to doubt their permanency,—more pleasant, like Mrs. Jellyby, to occupy

ourselves with the short-comings of our neighbors, looking so earnestly at the heathen of Boorioboola-Gha as not to see those at our doors, than to examine closely our own short-comings,—more comfortable and more pleasant, but not always more profitable. It seems to us that the process of deterioration has commenced in Philadelphia; and, as space is apparently wanting to enter fully into this subject, further discussion must be postponed until our next issue.

WE print in another column an account of a death which recently occurred in London during the administration of ether. The phenomena, as detailed, are so peculiar—so different from anything we have ever seen during the administration of ether—that we cannot help suspecting the purity of the ether. Be this as it may, although this single addition to the ether mortality list affords an increase to the latter of many per cent., yet it does not shake our faith at all in the comparative, almost absolute, safety of the Boston anæsthetic. We spoke, in a recent editorial, of the probably great number of unreported cases of fatal chloroform-narcosis, instancing two in this city we knew of: since then, we have been informed of two more, occurring in the practice of a single surgeon.

DR. LEVIS'S operation, which we noticed some weeks since, is apparently a success so far as the aneurism itself is concerned. The tumor has become very hard, and pulsation in it, as in the radial and axillary arteries, has ceased. No local irritation has occurred in or about the aneurism since the operation, nor any inconvenience from arrest of circulation through the subclavian and the axillary, and its diversion to other channels. Pain has been almost entirely relieved. The patient's only inconveniences seem now referable to pressure of the consolidated mass of the aneurism on the upper part of the right lung, impeding its circulation and producing engorgement. As a consequence the patient has been expectorating mucus darkly colored with blood.

ON Wednesday last a week Dr. F. F. Maury cut the brachial plexus in the case of superficial neuroma reported in the last number of *Hays's Journal*. The patient is doing well, but the relief has only reached the lower two-thirds of the affected skin, the remainder evidently being supplied by the cervical nerves.

OUR namesake "*The Medical Times*" (Canada) certainly does honor to us in other ways than by adopting our title. One-third of the number just received, we see, is taken from our columns. The editor of *The Medical Times* is certainly a sensible man,—knows what is valuable and readable.

CORRESPONDENCE.

LONDON LETTER.

[From Our Own Correspondent.]

The Month of Congresses—The British Association for the Advancement of Science—The School of British Physiologists—Their Divergencies—Dr. Rutherford's Address to the Section of Physiology—Dr. Ferrier's Researches in the Functions of the Brain—Revolution in Cerebral Physiology—Confirmation of the Pathological Views of Dr. Ferrier—The Pharmaceutical Conference—The Position of Pharmacists in Great Britain—Their Education, Views, and Political Influence—Their Leaders—Unusual Doses—The Medical Schools.

LONDON, October 3, 1873.

THE months of August and September are essentially "Congress" months in this country. The "season" is over; all London is out of town; and not only all London, but all the inhabitants of great cities, are taking holiday. Hence the peripatetic associations which have become so numerous in this country, and which are becoming hardly less numerous abroad, choose August and September as the most convenient months in which to rally their scattered members. Besides the British Medical Association, we have had the meetings of the British Association (at Bradford), of the Pharmaceutical Conference, and of the Social Science Association at Norwich, at all of which matters of interest to medical readers have come under discussion. The Section of Physiology at the British Association generally produces matters of interest to medical science. It was this year under the presidency of Dr. Rutherford, Professor of Physiology at King's College; and his address was mainly upon the importance of physiology as a preliminary medical study, and as one to which medical science must look for its chief elements of progress in the future. There is, it may be mentioned, a certain party here among our younger physiologists who are rather jealous of the association of physiology with medicine, and who are disposed to divorce it, if possible, from medicine, with the idea of making it assume in universities the dignity of a separate and abstract science. Among these may be mentioned Huxley, Michael Foster, Ray Lankester, and the whole school of physical and zoological physiologists. To these are opposed, in this respect, Sharpey, Burdon-Sanderson, Hughes Bennett, Rutherford, Gamgee, Ferrier, Lauder-Brunton, and others who are actively engaged in the revival of experimental physiology as a favorite and necessary study in our medical schools. There is no question that it had fallen greatly into neglect during the past quarter of a century; and as Virchow pointed out in his address to the British,

Medical Association in August, this was especially surprising and regrettable in the country which had produced in the beginning of the century Hunter, Bell, and Marshall Hall, and had given the signal on the Continent for the vigorous prosecution of physiological research. The revival of such studies was in this country greatly due to the energy of Hughes Bennett. It is from the Edinburgh school that Sharpey, Burdon-Sanderson, Ferrier, Mr. Kendrick, Arthur Gamgee, Rutherford, and Lauder-Brunton have proceeded; Michael Foster is the immediate pupil of Sharpey; and the physiologists named are now all in their turn teachers, and are building up schools of experimental physiology which are already producing apt and able scholars, such as Garrod, Galabris, Galton, and Mosely,—young men of the highest promise, of whose names you will hear more as the years roll on. Dr. Rutherford has an especial right to dwell upon the close connection between experimental physiology and medical study, because he has done more than most others to revive it in this country.

The most interesting topic discussed in the Section of Physiology at Bradford were the remarkable recent researches of Dr. Ferrier, of King's College, on the subject of the Functions of the Brain. These researches, of which the first conclusions were published in the *British Medical Journal* of April 26, and of which a fuller account will be found in the recently published volume of Transactions of the West Riding Asylum, have deservedly attracted a very great share of attention from British physiologists. They are, indeed, of so remarkable a character, and will so largely revolutionize our views of cerebral physiology, that the briefly-stated conclusions just published were regarded with considerable incredulity. But as the method employed was more clearly explained, and the experiments were witnessed by competent observers, they were found to be quite trustworthy; and Sharpey, Rutherford, Sanderson, and Brunton have concurred in describing them as the most remarkable and important researches for years prosecuted in the department of cerebral physiology. They have been the subject of leaders in the *Times* and other daily papers; and the effect of the attention directed to the subject has been to set every one reading the West Riding Reports, where the full particulars are given. Briefly, Professor Ferrier's method of proceeding has been to remove the skull-cap of living animals under chloroform and to faradize the special convolutions of the brain. The result has been not only to modify our view of the functions of the parts of the brain, but to show a definite localization of function beyond what had been anticipated since the destruction of the so-called phrenological system by the demonstration of its errors of interpretation, and to confirm in a remarkable degree the pathological conclusions at which Dr. Hughlings Jackson has laboriously arrived by a series of clinical and post-mortem investigations which have attracted but too limited attention, but which will assuredly live in the history of medicine as affording data of first-rate im-

portance. I will venture to transcribe from the *London Medical Record* a summary of the more important conclusions of Ferrier, as being the most novel and interesting matters of research at this moment under medical notice:

"1. The anterior portions of the cerebral hemisphere are the chief centres of voluntary motion and the active outward manifestation of intelligence.

"2. The individual convolutions are separate and distinct centres; and in certain definite groups of convolutions (to some extent indicated by the researches of Fritsch and Hitzig), and in corresponding regions of non-convoluted brains, are localized the centres for the various movements of the eyelids, the face, the mouth, the ear, the neck, the hand, foot, and tail. Striking differences corresponding with the habits of the animal are to be found in the differentiation of the centres. Thus, the centres for the tail in dogs, the paw in cats, and the lips and mouth in rabbits, are highly differentiated and pronounced.

"3. The action of the hemispheres is in general crossed; but certain movements of the mouth, tongue, and neck are bilaterally co-ordinated from each cerebral hemisphere.

"4. The proximate causes of the different epilepsies are, as Dr. Hughlings Jackson supposes, 'discharging lesions' of the different centres in the cerebral hemispheres. The affection may be limited artificially to one muscle, or group of muscles, or may be made to involve all the muscles represented in the cerebral hemispheres, with foaming at the mouth, biting of the tongue, and loss of consciousness. When induced artificially in animals, the affection, as a rule, first invades the muscles most in voluntary use, in striking harmony with the clinical observations of Dr. Hughlings Jackson.

"5. Chorea is of the same nature as epilepsy, dependent on momentary discharging lesions of the individual cerebral centres. In this respect Dr. Hughlings Jackson's views are again experimentally confirmed.

"6. The corpora striata have crossed action, and are centres for the muscles of the opposite side of the body. Powerful irritation of one causes rigid pleurosthotonos, the flexors predominating over the extensors.

"7. The optic thalamus, fornix, hippocampus major, and the convolutions grouped around it, have no motor signification.

"8. The optic lobes or corpora quadrigemina, besides being concerned with vision and the movements of the iris, are centres for the extensor muscles of the head, trunk, and legs. Irritation of these centres causes rigid opisthotonos.

"9. The cerebellum is the co-ordinating centre for the muscles of the eyeball. Each separate lobule (in rabbits) is a distinct centre for special alterations of the optic axes.

"10. On the integrity of these centres depends the maintenance of the equilibrium of the body.

"11. Nystagmus, or oscillation of the eyeballs, is an epileptiform affection of the cerebellar oculo-motorial centres.

"12. These results explain many hitherto obscure symptoms of cerebral disease, and enable us to localize with greater certainty many forms of cerebral lesion."

At the Pharmaceutical Conference a great number of pharmaceutical chemists assembled to discuss points of more or less general interest. The dispensing chemists of this country are now a very numerous and influential body, and their influence is increasing. Since the passing of the Pharmacy Act, no one can sell toxic substances and dispense medicines without passing an examination on the ordinary preliminary subjects of education, including an elementary knowledge of Latin, and subsequent examinations in pharmacy, chemistry, and botany. The "minor" examination is, of course, a barely respectable minimum; but the "major" examination is one of fair stringency, and no really ignorant person, no man not fairly conversant with pharmaceutical knowledge, can enter into business as a chemist. This has necessarily done a good deal to give compactness, unity, and respectability to the trade. It puts it in some respects on a par with professions, and converts it into a monopoly. The trade is subject, in some degree, to government supervision, and the Privy Council has a veto on all regulations affecting the examinations, and nominates a visitor to inspect the examinations. The power of the government over the trade is, however, limited in theory, and in practice still more so, by the parliamentary organization of the pharmacists, and their influence in the legislature, which, like that of all numerous and compact bodies, is, when deftly wielded, considerable. It was the wish of the medical profession and of the leading pharmacists that the druggists should all adopt some sort of mechanical precaution to prevent the frequent recurrence of accidental poisoning. There was, indeed, an understanding with the government when the Pharmacy Act was passed that the Pharmaceutical Society, which is the controlling body among the pharmacists, would impose the use of "fluted bottles" in dispensing lotions and poisonous medicines, as a rule obligatory on all dispensing chemists. The council issued rules accordingly, but they were overthrown by the popular vote; and when the government subsequently introduced a supplementary bill into Parliament to enforce such a rule it was met with so much opposition that it was quietly dropped. I mention this short history to illustrate the strong position which English pharmacists now hold. On the whole, it must be said that they use it well. Counter-practice and irregular prescribing prevail to a considerable extent in the poorer neighborhoods and in country places, but are discouraged by the leaders in the trade, and, in theory, are always reprobated as they should be. Practically, among the poorer classes it is difficult to put a stop to them. They cannot well afford to pay medical fees for advice as well as for medicines; and possibly the sort of advice and medicine they get at the druggist's shop (or, as they call it, the doctor's shop) for a few pence meets their necessities and the hard conditions imposed by their poverty better than any other would do which can at present be devised.

The leading pharmacists here are J. Hyde Hills, W. Sandford, Carteighe, Morson, Savory, etc. They are public-spirited and able men. Mr. Hills holds an exceptionally good position as the personal friend of many of the leading physicians and surgeons of the day, and is a thoroughly trustworthy and honorable man. Mr. Sandford is the orator of the company, and varies in his addresses from the sublime to the ridiculous. He is hot-tempered and wrong-headed, and lately led an ill-advised opposition to the admission of women to the Pharmaceutical Society, which has brought the society into some discredit. But it would be difficult to find any society of retail shop-keepers who conduct their affairs, on the whole, with more dignity and public spirit than the druggists of Great Britain.

The recent condemnation of a druggist for refusing to dispense an (intentionally) large dose of digitalis prescribed for a patient in delirium tremens has led to much discussion, the patient having died, and the druggist being censured by a coroner's jury. This case was considered at the conference, and a resolution was passed asking medical men when they prescribe unusual doses always to initial the dose, in order to indicate intention, and in all cases to sign their prescriptions with their full name instead of their initials. The object of the latter request is to enable the dispenser to communicate with the prescriber privately when he has any doubt, or when he believes that a *lapsus calami* has occurred.

While I write, the introductory lectures are being delivered at the medical schools, and the schools are re-opening for the winter session. They will, no doubt, furnish material for my next letter.

NOTE ON LANCING THE GUMS IN DIFFICULT DENTITION.

TO THE EDITOR OF THE PHILADELPHIA MEDICAL TIMES.

DEAR SIR,—The excellent communication of Dr. James W. White upon Pathological Dentition, and the valuable extract from an incisive article of Dr. J. Foster Flagg's, have brought the subject of cutting the gums in children whilst teething so prominently before your readers that I think perhaps an incident from my own experience may be interesting enough to warrant its publication in your columns. From the circumstance that the little patients in these cases are generally too young to appreciate our efforts for the mitigation of their sufferings by the aid of the gum lancet, any subjective facts in favor of operations of this character must necessarily be rare, or at least difficult to collect; but, as a nucleus for the aggregation of such testimony, permit me to report the following.

My youngest child, a little girl, commenced to teethe after attaining the age of one year, and suffered severely during the process, often obtaining apparent relief, however, from free incisions into the tense and swollen gums. On one of the latter of these occasions, when she was about twenty-six months old, I found, on re-

turning near midnight from a late visit, that she had been awake and fretful most of the evening, complaining at short intervals of her teeth. Upon my entering the chamber, she at once (to the profound surprise of her mother and astonishment of the nurse) cried out, as well as she could between her sobs, "Papa, lance 'em! papa, lance 'em!" and bravely held open her mouth for the operation. When performed, this was followed, as the poor child had learned to expect, by such prompt and complete ease that she soon sank into a quiet slumber, which continued until morning, forming a marked contrast—most agreeable for all concerned—to the distressed restlessness she displayed up to the moment of incising her gums.

Very respectfully yours, etc.,

JOSEPH G. RICHARDSON, M.D.

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GLEANINGS FROM OUR EXCHANGES.

DEATH FROM THE INHALATION OF ETHER.—We have this week to make the sad announcement of a death from the inhalation of ether. It occurred at the Royal South Hants Infirmary. We shall be glad of the comment of Dr. Morgan and of our Boston contemporaries. David Newman, aged 14, a strumous lad, who had suffered from repeated attacks of cornitis, was admitted an in-patient of the above institution on September 25, 1873, under the care of Dr. Lake. On Wednesday, October 1, he was brought into the operating-room in order that iridectomy might be performed. When on the table he exhibited considerable alarm, and required some persuasion before he was induced to lie down. Dr. Griffin having taken charge of the pulse, half an ounce of ether was poured on a sponge contained in a cone of spongio-piline, and the latter was closely applied to the mouth and nose. After a few minutes' inhalation, the ether being nearly exhausted, three drachms more were poured on the sponge. Shortly after commencing to inhale this second quantity he began to struggle violently, getting at length into a state bordering on opisthotonos, his face becoming intensely scarlet. Dr. Griffin then announced that his pulse, which up to this time had been perfectly natural, had become very feeble. The ether was at once discontinued, when, the pulse having improved, Dr. Lake operated, no more ether being administered. At the close of the operation, which occupied only a few seconds in its performance, and before the eye could be bandaged, the pulse became imperceptible, the breathing was suspended, and the countenance livid. The tongue was drawn well out of the mouth and held there, the calves of the legs were vigorously flagellated, and the chest freely slapped with a wet towel. The effect of these measures was to cause the patient to respire freely, to cry out lustily, and to kick about on the table; but this improvement did not last long,—probably about a minute. The pulse at the wrist did not return, and the breathing again stopped. Artificial respiration—at first by Silvester's method, afterwards by Marshall Hall's—was then had recourse to; at the same time an intermittent current of faradic electricity was passed in the course of the phrenic nerve; this at first caused strong periodic contractions of the respiratory muscles; but after about ten minutes or a quarter of an hour these ceased to respond to the current, and it became evident that life was extinct. These measures were, however,

still persevered with for about three-quarters of an hour. At the necropsy, twenty-one hours afterwards, the brain was found to be healthy, and not much congested. The right cavities of the heart were full of dark fluid blood, but the left cavities contained only about a drachm of a similar fluid. The valves were healthy. The muscular structure, although somewhat flabby, presented no decided evidence of fatty degeneration. The lungs were congested, and of a somewhat bright red color. The other organs were healthy. —*British Medical Journal.*

DILATATION OF THE CERVIX UTERI IN DYSMENORRHEA (*New York Medical Journal*, October, 1873).—Dr. John Ball recommends the following method of procedure in cases of constricted cervix uteri. Having procured the thorough evacuation of the bowels of the patient, place her upon her back, with the hips near the edge of the bed, and when she is profoundly anesthetized introduce a three-bladed, self-retaining speculum; seize the os uteri with a double-hooked tenaculum; draw it down towards the vulva, and then introduce a metal bougie as large as the canal will admit, following it in rapid succession by others of larger size, until one is reached which represents the size of the dilator. Then insert the dilator and stretch the cervix in every direction until it is enlarged sufficiently to admit a No. 16 bougie, which is all that is generally necessary. Then introduce a hollow gum-elastic uterine pessary of about that size, and retain it in position, by a stem secured outside the vulva, for about a week, in which time it has done its work and is ready to be removed. During this time the patient should be kept perfectly quiet, and usually upon her back. Dr. Ball claims that the operation saves a great deal of time, causes much less constitutional disturbance than the use of tents, and is not only safer than the metrotome, but is free from some serious objections to the use of the latter, there being no resulting cicatrix to interfere with the dilatation of the parts, and the condition of the patient after an unsuccessful operation being no worse than before. He says that it relieves the constriction entirely, by breaking up all the adhesions, which are often firm and unyielding; that, acting as a derivative, it cures the hyperæmia of the cervix; and that, further, it establishes a radical change in the nutrition of the whole organ.

He details nine cases of stricture of the os and cervix complicated with vaginismus, chronic endo-cervicitis, version, sterility, dysmenorrhœa, etc., in all of which very great relief or permanent restoration to health was effected by rapid and forcible dilatation. In a foot-note the editor of the *New York Medical Journal* quotes Dr. Ellinger, of Stuttgart, as recommending the operation,—1, in stricture of the cervical canal; 2, stenosis due to flexions; 3, metrorrhagia in a flabby, swollen uterus, but without new growths; 4, retained catarrhal secretions; 5, for exploration of the uterine cavity; 6, replacement of a flexed uterus; 7, sterility. Dr. Ellinger declares that he has never had reason to regret rapid dilatation, and urges it, where dilatation is justifiable at all, to the exclusion of all other methods.

THE CAUSES OF DEATH AFTER SEVERE SUPERFICIAL BURNS.—This question is discussed at considerable length by Dr. Mendel, of Paukow, in the *Vierteljahrssch. für ger. u. off. Med.* (xiii. 1). It is a familiar fact that a superficial burn involving more than one-half of the surface of the body is pretty sure to be fatal, while death may be expected in a majority of cases where only one-third of the body is burnt. Death may ensue at three different stages of the wound,—the periods of irritation, inflammation, and suppuration,—and at each different stage the mode of death is different.

1. *Causes of Death in the Period of Irritation.*

a. *Paralysis of the Central Nervous System.*—This is probably the result of the shock experienced by the nervous system at the time of the reception of the burn. It is of brief duration, and often passes unnoticed.

b. *Congestion of the Internal Organs.*—Immediately after the accident, a reaction, more or less violent, takes place, characterized by congestion of the encephalon and its membranes, of the lungs and pleura, and also of the alimentary canal and peritoneum, accompanied often by sanguineous exudations upon the lungs and heart.

2. *Causes of Death in the Stage of Inflammation.*—

These are the internal inflammations induced by the cutaneous inflammation, and having their seat, commonly, in that organ situated the nearest to the burn. Meningitis and encephalitis are relatively rare; pneumonia is much more frequent, as are also pleurisy and pericarditis. Gastro-intestinal inflammation is an unusual accompaniment, and, when it occurs, its seat is usually in the duodenum. Another lesion, noticed almost invariably in the duodenum, is *ulceration*, analogous to the round ulcer found in the stomach. This may advance to perforation, and thus induce peritonitis, or the destruction of a vessel may take place, and death may then result from hemorrhage. To account for the peculiar localization of this lesion, we are forced to resort to various hypotheses; some pathologists connecting it with the situation of Brunner's glands, others ascribing the ulceration to embolism, and others still to some chemical change in the constituents of the bile. In some instances, tetanus has been observed in this stage of a burn.

3. *Causes of Death in the Stage of Suppuration.*—

These are exhaustion, pyæmia, septicæmia, renal disturbance accompanied by anasarca, and intestinal hemorrhages.

Death has been known to take place suddenly, without any appreciable cause, even after complete cicatrization of the wound had taken place.—*Boston Medical and Surgical Journal*.

MISCELLANY.

DR. NÉLATON, who has just died, lingered for several weeks, and suffered a good deal. He knew of his condition during this time, and often repeated the remark, "Death is long in coming." During the few days before his death he received three letters from the ex-Empress and her son, dated at Chiselhurst, and he read each of them several times. The last letter of the Empress contained the following postscript: "I reopen my letter to tell you that the Prince, before leaving for Woolwich, begged to be remembered to you." The night before his death he said to his son, "Do as much good as you can in life,—above all, without noise." The first phrase in his will is thus written: "I desire that my wife shall bring up my son to respect religion, honor, and work." His codicil expressly requested that no discourse should be pronounced over his tomb, and that the funeral should be as simple as possible. By taste, and somewhat through vanity, he avoided a display of instruments in his operations: he called it "surgery with a big orchestra." He had a small, dry hand, with pointed fingers and a long thumb: this hand was his principal instrument. His coolness equalled

his dexterity. "When you have a correct diagnosis, you know where you are going, and you don't risk anything," said he. One day, after homœopathy had secured a foothold in France, a doctor of that school, rubbing his hands with exultation, said to Nélaton, "You see, we are gaining ground every day." "Yes,—in the cemeteries," added he. The Emperor said to him, when he cured his son in 1867, "I thank you, Monsieur Nélaton; you have saved my son." "I am glad of it, sire," was his answer, "for I have at the same time saved my reputation." Dupuytren, the greatest genius in the science of surgery of modern times, was his master. The pupil did not equal the master, but he had a greater number of clients among distinguished people. He was a hard worker, and gifted with a rare intelligence. He possessed, too, a certain talent for elocution which tempted him to compete for the professorship of the surgical clinic. He failed the first time, in 1850, but the second time, in 1851, he won, and the occasion was memorable on account of the number and character of his competitors. The faculty of the college had reason to congratulate itself on having attached him to the institution. His teaching was brilliant, and he drew around him a numerous following of studious young men. His successes in the hospital, the certainty and the precision of his diagnosis, his sure judgment and astonishing dexterity, all joined to much gentleness of manner towards patients, soon created for him a great reputation. He became the surgeon of Louis Napoleon; extracted the ball from Garibaldi,—the story of which is now legendary,—and honors reached him from all sides. Clients came to him in such numbers that he was obliged to give up his professorship. Soon after he was made Senator and Grand Officer of the Legion of Honor; Royer, Michel Lévy, and Ricord being the only other physicians who have received this honorable distinction. Science is indebted to him for some modifications in operating. He has given his name to a process for setting the shoulder, and another for the elbow, also to one called the *taille de Nélaton*. The rigors of the siege of Paris contributed to his death, and he finally succumbed to an organic disease of the heart from which he had long suffered.—*Paris Letter to New York Tribune*.

TO RESTORE COLOR TO FABRICS.—When color on a fabric has been accidentally or otherwise destroyed by acid, ammonia is applied to neutralize the same, after which an application of chloroform will, in almost all cases, restore the original color. The application of ammonia is common, but that of chloroform is little known. Chloroform will also remove paint from a garment, or elsewhere, when benzole or bisulphide of carbon fails.—*American Artisan*.

THE student who was asked the use of starch in germination, and who replied that, "In the German nation, as elsewhere, starch is used for doing up linen and similar laundry purposes," intends to take an extra course of botany during summer vacation.—*Boston Journal of Chemistry*.

PATRONESSES OF QUACKERY.—Since the days of St. John Long, when duchesses entered the witness-box to depose to the marvellous effects of that impostor's liniment, there has always been an irresistible attraction for the ladies of the upper ten thousand in any delicate bit of quackery. Globules are *distingué*. There is none of the grossness or materialistic appearance which belongs to an apothecary's bottle,—globules and dilutions being to medicine what the fragrance of an herb is to its medical potency. It is interesting to be in delicate health, and under homœopathic guidance that ladylike characteristic may be indulged without the discomforts of nasty bottles. Accordingly, the *crème de la crème* are, at least, professing homœopaths; and we observe from the prospectus of a Homœopathic Bazaar that titled patronesses are neither scarce nor undistinguished. H.R.H. the Duchess of Cambridge leads off, supported by five other duchesses. Five marchionesses follow, among whom are especially notable the Marchioness of Westminster and the Marquise de Caux (Madame Adelina Patti). Next we have ten countesses and nine viscountesses, the Countess Granville leading this division. Then we find about fifty "ladies" or "baronesses," including such names as Ebury, Elcho, Lawrence, Rothschild, Seymour, Havelock, Erskine, etc. The mere honorable and untitled ladies who bring up the rear are grand enough to shed lustre on any ordinary cause, including as they do such names as Mrs. Milner Gibson, Mrs. Knatchbull-Hugessen, and others whose husbands' names are linked with wealth, talent, or fashion.—*Dublin Medical Press and Circular*.

OPIUM-LAND pays a price in Malwa unknown in any other part of India. Meadow-land about a market town in England is scarcely more remunerative to landlords than thousands of square miles blooming with the poppy are to the chiefs of Malwa.—*The Clinic*.

WHY is a tom-cat like a surgeon? Because they both mew-till-late.

THE following may be regarded as representing tolerably accurately the number of new students at the metropolitan medical schools this year: St. Bartholomew's, 105; Guy's, 90; University College, 83; St. Thomas's, 55; King's College, 40; Middlesex, 38; St. George's, 37; London, 32; St. Mary's, 21; Charing-Cross, 15; and Westminster, 10.—*London Lancet*.

CHAUTAUQUA COUNTY MEDICAL SOCIETY, NEW YORK.—At the annual meeting held at Dunkirk, N.Y., July 8, 1873, the following officers were elected for the ensuing year: President, Dr. A. Waterhouse, Jamestown, N.Y.; Vice-President, Dr. S. M. Smith, Dunkirk, N.Y.; Secretary and Treasurer, Dr. T. Charles Wilson, Portland, N.Y.

As illustrating the adroitness of many lunatics in concealing their illusions, it is related that the French novelist Balzac once became so much interested in a man whom he believed to be unjustly confined in an asylum as to carry the case before the courts and obtain a decree for his liberation. On the day of his release he invited

the man to breakfast with himself and a few friends. The invitation was so stoutly declined that Balzac demanded the reason, and at last extorted from the poor fellow that it was impossible for him to appear except at night, *because he was the moon*.—*Cincinnati Lancet and Observer*.

PRECOCIOUS DENTITION.—We read in *L'Union Médicale du Canada*, October, "Dr. C. M. Filiatrault, of this city (Montreal), informs us that during the past month he attended the accouchement of a woman who brought into the world a child whose two inferior incisors were pierced through at the moment of birth. It was a masculine child, and well formed. It is known that Louis XIV. was also provided with two teeth at the time of birth."—*Canada Medical Times*.

THE death of Sir Henry Holland is announced by telegraph in the daily papers.

RETURN OF DEATHS AND INTERMENTS IN PHILADELPHIA FROM SEPTEMBER 28 TO NOVEMBER 1, 1873.

DISEASES.	Adults.	Minors.	DISEASES.	Adults.	Minors.
Abscess.....	9	1	Fever, Scarlet.....	1	8
Albuminuria.....	2	...	" Typhoid.....	26	14
Anæmia.....	1	...	" Typhus.....	4	1
Aneurism of the Aorta.....	1	...	Fracture of the Skull.....	2	...
Apoplexy.....	30	1	" Thigh.....	1	...
Asphyxia.....	1	1	Gangrene.....	1	...
Asthma.....	1	...	Hæmorrhage.....	2	6
Burns and Scalds.....	7	7	" Lungs.....	1	...
Cancer.....	7	1	" Stomach.....	1	...
" of Breast.....	1	...	Hernia.....	1	...
" Liver.....	1	...	Hooping-Cough.....	...	4
" Stomach.....	5	...	Inanition.....	2	19
" Uterus.....	4	...	Inflammation of Brain.....	7	20
Caries of the Spine.....	1	...	" Bladder.....	...	1
Casualties.....	18	80	" Bronchi.....	6	5
Cerebro-Spinal Meningitis.....	5	8	" Eye.....	...	1
Cholera Infantum.....	...	23	" Heart.....	2	...
Morbus.....	1	...	" Kidneys.....	1	...
Cirrhosis of Liver.....	13	1	" Larynx.....	1	3
Compression of Brain.....	1	1	" Liver.....	6	1
Consumption of Bowels.....	1	...	" Lungs.....	23	23
Lungs.....	199	21	" Peritoneum.....	...	...
Congestion of Bowels.....	...	1	" um.....	13	2
" Brain.....	16	19	" Spine.....	1	...
" Liver.....	...	1	" Stomach & Bowels.....	16	14
" Lungs.....	11	5	" Uterus.....	1	...
Convulsions.....	2	53	" Veins.....	...	1
Cramps.....	...	1	Intemperance.....	6	...
Croup.....	...	17	Intussusception.....	2	...
Cyanosis.....	...	6	Jaundice.....	2	...
Debility.....	35	49	Leucocythæmia.....	2	...
Degeneration of Kidneys.....	1	...	Mania a potu.....	3	...
Liver.....	1	...	Marasmus.....	2	57
Diarrhœa.....	13	5	Measles.....	...	1
Diphtheria.....	...	11	Murder.....	...	1
Disease of Brain.....	2	3	Necrosis.....	1	...
Heart.....	30	7	Neuralgia of the Heart.....	3	...
Kidneys.....	12	...	Obstruction of Bowels.....	2	...
Liver.....	2	...	Old Age.....	51	...
Lungs.....	1	...	Paralysis.....	18	...
Spine.....	1	...	Pyæmia.....	4	...
Stomach.....	1	...	Rheumatism.....	1	...
Uterus.....	1	...	Scrofula.....	1	2
Dropsy.....	21	7	Septicæmia.....	1	...
" of Abdomen.....	6	...	Softening of Brain.....	7	...
" Brain.....	1	11	Still-Born.....	...	79
" Chest.....	2	...	Stricture of Esophagus.....	1	...
" Heart.....	3	...	Suffocation.....	...	1
" Lungs.....	1	...	Suicide.....	4	...
" Ovaries.....	2	...	Syphilis.....	2	1
Diabetes.....	2	...	Tabes Mesenterica.....	...	1
Drowned.....	8	4	Teething.....	...	5
Dysentery.....	7	2	Tetanus.....	1	2
Effusion on Brain.....	...	1	Tumors.....	7	...
Epilepsy.....	6	...	Thrombosis.....	1	...
Erysipelas.....	3	...	Ulceration of Bowels.....	1	...
Fatty Degene'n of Heart.....	2	...	" Lungs.....	1	...
" Liver.....	1	...	Unknown.....	5	3
Fever, Catarrhal.....	...	3	Uræmia.....	1	...
Intermittent.....	1	...	Wounds, Gunshot.....	2	1
Puerperal.....	2	...			

TOTALS..... 750 555

SATURDAY, NOVEMBER 15, 1873.

ORIGINAL COMMUNICATIONS.

ON THE INHALATION OF NITROUS OXIDE, NITROGEN, HYDROGEN, AND OTHER GASES AND GASEOUS MIXTURES.

BY ELIHU THOMSON,

High School Laboratory, Philadelphia.

IN No. 100, vol. iii., of the *Medical Times*, appears a translation from the French of Drs. Jolyet and Blanche, on the protoxide of nitrogen, in regard to its effects upon living organisms. Having been independently pursuing the same or similar investigations for some time past, I take this opportunity of laying my results before those interested.

I was led to undertake the experiments described herein, by a consideration of the effects of the inhalation of nitrous oxide gas upon the different persons to whom I have seen it administered. There are certain marked effects produced by respiring nitrous oxide, which I believe are common to all persons,—certainly to those cases coming under my immediate notice.

The first marked effect of nitrous oxide inhalation is a quickening of respiratory movements, which effect continually increases up to the period of insensibility. In some cases the breathing is very rapid and laborious, two or three inspirations being made per second.

Another effect, that seems to be common to all cases, is that during the period of unconsciousness, so called, there is left scarcely more than a bare idea of existence: all other ideas seem to be obliterated. Another common effect is, that before the period of unconsciousness there is a confusion of ideas. The appearance of a person who has become unconscious from the inhalation of nitrous oxide is evidently that of asphyxia or suffocation. The countenance assumes a leaden hue, the eyes lose their lustre and have, instead, a vacant stare. These considerations led me to the conclusion that the effects, as above enumerated, were the results of true asphyxia, rendered bearable by there being furnished an inert gas with which the lungs may be filled and emptied as often as may be. The case may be compared to that of a hungry man satisfying the craving for food by eating clay or other inert substance, but who would certainly starve if the practice were continued, at the same time that he would require to make very frequent use of the clay to allay his hunger.

In order to become fully satisfied of the real state of the case,—that is, that the effects above cited are due to incipient suffocation or partial asphyxia,—a few experiments were tried.

It was naturally supposed that other inert gases, as hydrogen and nitrogen, should, if breathed, produce effects almost the same as those of the nitrous oxide, assuming the effects of the latter to be in reality due to asphyxia.

The following is an account of the experiments conducted, and the deductions from them:

Experiment I.—Pure hydrogen was prepared and placed in a small gas-bag, and breathed in the same manner as nitrous oxide is administered. A few seconds after commencing the inhalation, the breathing became rapid and labored, then a feeling of lightness ensued, followed by a decided confusion of ideas, an indescribable fluttering noise, a slight affection of sight, all tending to show the approach of unconsciousness.

The breathing of the hydrogen was discontinued just short of producing unconsciousness; and upon breathing air the return to a normal condition took place with great rapidity.

The above experiment was repeated by myself and another, with a recurrence of the same effects, which are evidently the results of partial asphyxia.

Experiment II.—A quantity of nearly pure nitrogen was prepared by a process not generally known, and, so far as I am aware, first employed by myself. When one volume of nitric oxide is mixed with four volumes of air, and the mixture thoroughly washed by water, about three and a quarter volumes of nitrogen are the result.

The nitrogen was breathed in the same manner as the hydrogen in the foregoing experiment, and was followed by the same effects, which, however, were produced much more slowly than in the case of hydrogen. The effects, too, were very much longer in passing off.

This latter fact is, doubtless, owing to the low diffusive power of nitrogen compared with that of hydrogen.

The effects of hydrogen and nitrogen, it will thus appear, do not differ from those of nitrous oxide. Of the three gases above mentioned, nitrous oxide is, in my judgment, least unpleasant to inhale, owing, probably, to its solubility in the blood giving it an exhilarative effect. It will, therefore, still continue to occupy the first rank in producing insensibility to pain.

It may be mentioned that in no case was any disagreeable after-effect produced by the inhalation of either hydrogen or nitrogen; and I am of the opinion that when the gas is shown to be pure there can be no danger for persons in sound health to make an experiment of this nature.

In order to test the matter in consideration still further, a few interesting experiments were instituted, as follows:

Experiment III.—A mixture of four parts by volume of hydrogen and one of oxygen was made. The mixture filled a large jar of a capacity of three and a half gallons.

A small kitten was then placed in the mixture, and the mouth of the jar tightly closed. The kitten manifested not the least inconvenience from breathing the mixture of hydrogen and oxygen, its effect not differing from that of common air, it being, indeed, air in which the nitrogen was replaced by another inert gas, hydrogen. The kitten remained in the jar fifteen minutes, when it was removed. It cannot be doubted that the limit to life exist-

ing in such a mixture would be when the greater part of the oxygen had been converted into carbonic acid. The gases remaining in the jar after the experiment were examined, and found to contain a notable quantity of carbonic acid. Another portion being fired by a lighted match exploded with considerable violence.

Experiment IV.—The same jar as used in the above experiment was again filled, but with pure hydrogen only, and the kitten placed in it as before. It immediately began gasping and showing signs of great inconvenience, and in less than fifteen seconds it had become motionless and insensible. On being brought into the air it recovered its normal condition in a few seconds. It gave no manifestation of pain on being pinched while insensible. In this experiment the insensibility is clearly seen to be due to asphyxia, or a want of oxygen, which was absent.

This experiment was repeated, coal-gas, well purified, being substituted for the hydrogen. Insensibility followed very rapidly, and on withdrawing the kitten from the jar it manifested no signs of vitality, except an irregular heart-action. The breathing had entirely ceased. Artificial respiration soon induced a succession of convulsive movements as of breathing, which gradually became regular, the kitten at the same time manifesting symptoms of returning vitality.

Consciousness was at last restored. There existed insensibility to pain up to the time of regaining consciousness. The experiment occupied about five minutes.

From this it would seem that coal-gas not only asphyxiates, but at the same time exerts a poisonous influence, causing entire cessation of breathing.

Experiment V.—A kitten was placed under the receiver of an air-pump and the air exhausted until the mercury in the barometer-gauge stood at six inches, which would leave but one-fifth the original amount of air in the receiver. The effects upon the kitten were nearly the same as with pure hydrogen (Exp. IV.), it soon falling over motionless and insensible. On allowing the air to re-enter the receiver, the kitten was restored in an exceedingly short space of time. This experiment was made with a view to comparing it with that which follows.

Experiment VI.—The same receiver, of capacity of about two and a half gallons, as used in Experiment V., was entirely exhausted of air and filled with pure oxygen gas. The kitten was then placed in the receiver so filled, and the oxygen exhausted until the mercury stood, as before, at six inches, leaving one-fifth the original weight of oxygen still in the receiver in an expanded state. In this partial vacuum the kitten remained twenty minutes, during the whole of which time it manifested not the least sign of inconvenience, sitting quietly, and showing attention when called or otherwise disturbed. The partial vacuum contained as much oxygen as is found in the same bulk of air. The vacuum was as good at the conclusion of the experiment as at the beginning.

This last experiment showed clearly that the rarefaction had no effect on the life-supporting

power, provided that the requisite amount of oxygen was present.

The above experiments lead me to adopt the following conclusions:

1. That the insensibility produced by the inhalation of nitrous oxide, nitrogen, hydrogen, and rarefied air is due to deficiency of oxygen, of which asphyxia is a result.

2. That the inert gases, nitrogen, hydrogen, etc., as well as a vacuum, are rendered capable of supporting life if a proportion of oxygen approaching that existing in common air be introduced.

I cannot agree with the conclusion of Messrs. Jolyet and Blanche that the respiration of nitrous oxide is at all dangerous if stopped at the proper time, for the experience of all who have used it shows that the asphyxia it produces leaves no harmful effects.

ON THE TREATMENT OF FRACTURES OF THE LOWER EXTREMITY OF THE RADIUS.

BY JOHN ASHHURST, JR., M.D.,

Surgeon to the Episcopal Hospital, Surgeon to the Children's Hospital, etc.

MORE than forty years ago Mr. Lonsdale enunciated the doctrine that fracture of the *shaft* of the radius should be treated by placing the forearm in a supine position, rather than in a position midway between supination and pronation, as was then, and as is still, done by the majority of surgeons. The reasoning by which Mr. Lonsdale enforced his opinion has always seemed to me just and conclusive, and his plan of treatment has met with the approval of many eminent authorities, among whom may be particularly mentioned M. Malgaigne, Mr. Callender, of London, Prof. Hamilton, of New York, and the late Prof. George C. Blackman, of Ohio. None of these gentlemen, however, with the exception of Mr. Callender, appears to have employed the supine position in the treatment of radial fracture, when the lesion has been situated below the point of insertion of the pronator radii teres. Mr. Callender extends the practice to all cases of fracture above the limits of the pronator quadratus, and by so doing has, in my judgment, taken a step decidedly in advance of his predecessors.

It is my object in this communication to go still further, and advise the employment of the supine position in the treatment of all cases of fractured radius, no matter what point of the bone may be involved, and whether the ulna is or is not also broken.

Some years ago I observed that more or less impairment of the power of supination remained after recovery in many of my cases of fracture of the lower extremity of the radius—Colles's, or, as it is more commonly though less correctly called in this city, Barton's fracture—which I had up to that time invariably treated with the forearm in a semi-prone position: indeed, almost the only cases with the result of which I was quite satisfied were those in which there was sufficient impaction of the fragments to

prevent any axial rotation of one upon the other. Hence I resolved to employ the supine position in these, as well as in the cases for which it was originally recommended by Lonsdale; and my experience has been so gratifying that I feel justified in recommending a trial of the plan to my professional brethren.

Axial displacement is no doubt less apt to occur and less marked in fractures through the broad carpal extremity of the radius, than when the shaft of the bone is the part involved; but I believe that it does occur, and that it deserves more consideration than it has commonly received. The muscles which supinate the upper fragment in these cases, as in those of fracture of the radius at a higher point, are the biceps and supinator brevis, which readily overcome the opposing action of the pronator radii teres; the supinator longus, attached to the styloid process of the radius, assists in producing the characteristic deviation of the hand toward the radial side; while the pronator quadratus, often lacerated by the edge of the upper fragment, draws the radius toward the ulna and thus tends to obliterate the interosseous space. What now is the necessary effect of fixing the limb in the semi-prone position, as ordinarily directed? Obviously, the upper fragment which cannot be fully controlled by the splints will be, in some degree at least, thrown into a state of supination by the muscles first mentioned, while the pronator quadratus is given the best opportunity to obliterate the normal space between the bones and thus allow the formation of callus in an undesirable position, the supinator longus, too, exerting a constant force which the surgeon hardly overcomes by using Dupuytren's ulnar splint or one of its numerous modifications.

The adoption of the supine position appears to me to obviate these difficulties; axial deformity is prevented, because both fragments are supinated to the same degree; the interosseous space—small at best in this part of the limb—is not encroached upon, for the position of supination and the even pressure of a well-padded palmar splint prevent the contraction of the pronator quadratus muscle; and the relaxed supinator longus has less tendency to maintain that abduction of the hand which has so often baffled the surgeon's efforts in the management of this injury.

The only objection to the mode of treatment which I have recommended is that, should the case be complicated with a luxation of the lower extremity of the ulna, the position of *extreme* supination would render it more difficult to keep the dislocated bone in place; but this difficulty may be obviated by making the pad which is placed upon the palmar surface of the limb broad enough to press directly upon the projecting ulna, and by limiting the degree of supination to an angle of from 120° to 130° .

With regard to the mode of carrying out the plan which I have advocated, I may say that I have been able to meet every indication by using the customary palmar and dorsal compresses, with either two straight splints or an ordinary "Bond's splint,"

such as is commonly employed in this city. The only point in which my practice differs from that of my neighbors is that I apply the dressings while the injured limb is in a state of supination, and that I keep it supinated during the whole course of treatment. I may add that I have found no objection whatever on the part of patients to maintain the required position, the supinated forearm being comfortably supported during the day in front of the body in a broad handkerchief sling, and extended at night, still supinated, upon a soft pillow.

ON THE TREATMENT OF ULCERS OF THE LEG BY CIRCUMCISION.

BY E. T. BRUEN, M.D.,

Resident Physician, Philadelphia Hospital.

IN the issue of the *Medical Times* for June, 1873, an article appeared, taken from a German journal, stating that chronic, extensive, and otherwise intractable leg-ulcers had been successfully treated by an incision around the circumference of the ulcer down to the deep fascia. If care was taken to prevent union of the cut surfaces, a rapid cure was effected under the use of a simple water-dressing. Two cases were treated in the surgical wards of the Philadelphia Hospital during the past summer; and, thinking that the results might interest some, I shall give their history, as follows. Their perusal will probably indicate why further trial of circumcision was not made.

Charles Garton, æt. 61, admitted to the hospital January 21, 1873. He had a small ulcer situated on the anterior and outer surface of the leg, midway between the ankle and the knee. He was treated with various dressings, but without success, until last June, when it was determined to try circumcision. This was accordingly practised about the 1st of June by my predecessor, with the following results. The tissue included between the line of incision and the ulcer immediately commenced to slough, so that in a few days the ulcer was enlarged about one inch all around; but the mischief did not stop here, for the ulcer continued gradually to spread, in spite of every application which could be suggested. The surface was twice brominized, but, notwithstanding, an abscess formed in the tissues over the ankle-joint, while the man's general health rapidly declined. Another abscess formed in the upper third of the leg, dissecting between the muscles; a third was formed in the calf, and death from septicæmia and exhaustion was feared. Under nourishing diet and suitable treatment, he gradually recovered his usual health; but before the spread of the ulcer was checked it had extended nine inches longitudinally, and five inches, or nearly around the limb, transversely. The surface has been slowly healing for the past eight weeks, and is now almost entirely well; but it occupied three months to restore him to the condition he was in before the trifling operation.

The other case was in a man—Robert McCauley, æt. 60—admitted to the hospital during the month of March, 1873. He had a small ulcer situated in the calf, in the middle third of the leg. He had suffered from it for at least fifteen years, but it had been entirely healed several times during that period. An incision about one and a half inches from the margin of the ulcer was carried around it. The tissue speedily sloughed, and the ulcer gradually increased in depth and extent: finally, an

imperfectly-nourished, callous cicatrix formed over a portion of the surface, and the ulcer remained more intractable than before. After many fruitless attempts to heal it, the man was etherized, and the hardened callous tissue was removed, the entire surface being afterwards cauterized. The resulting ulcer is at present about five inches in diameter, the same extent longitudinally, and is now showing a tendency to cicatrization; but the man states that it is larger than it has ever been previously.

It does not appear to me that cell-change is sufficiently active, nor is the vitality of chronic leg-ulcers of such a character as to justify the danger of enlarging the pathological surface when the morbid conditions can be treated by numerous other measures not open to such objections. The subject is so trite that I should not have ventured to report these cases had I not been aware that the method of treatment has been somewhat discussed. It is proper to add that both these cases seemed favorable for a fair trial of this new mode of treatment, as both men enjoyed excellent health.

October 22, 1873.

CASE OF TWINS CARRIED SIX MONTHS —JAUNDICE, ASCITES, ETC.

BY COMEGYS PAUL, M.D.

ON the 14th of February I was called to see Mrs. M., aged 29. In June, 1872, she was taken with an acute attack of jaundice, which, in a measure, shortly subsided. The yellow color, however, never entirely disappeared, and at different times was of a more decided hue than at others. Her general health in the mean time was apparently moderately good. She menstruated freely, naturally, and with regularity, until the middle of the following August, when the catamenia ceased, and she began shortly afterwards to exhibit signs of pregnancy. After the lapse of four months she felt the quickening of the child, and its movements were very perceptible to her till the second half of the sixth month, when they ceased; a slight secretion of milk entirely disappeared, the breasts became flaccid, and she gave other evidence of carrying a dead fetus. Still she continued to increase in size, and, becoming very much prostrated with attacks of acute pain, her friends became anxious about her, and determined to change their physician, who gave them an unfavorable prognosis, saying she had cancer of the liver.

This is the history so far as I could obtain it from the patient and her husband.

When I saw her in the middle of February my attention was particularly attracted to the bright-yellow color of her complexion, the abdomen enormously distended from ascites, the general anasarca, and the distressed expression of her countenance. Her pulse was 90, strong; her respiration oppressed by the abdominal distention. The day before, she had had a copious epistaxis. Vaginal examination showed an enlarged uterus, but its extent could not be determined, because of the excessive quantity of water surrounding it. The os uteri permitted the introduction of two fingers, but the examination

was otherwise unsatisfactory. The next day, with the assistance of my friend Dr. J. R. F. Bell, I could make out the presence of a child's head, and we decided upon the propriety of inducing labor the following day.

Unfortunately, this delay was fatal to her. That very night she expelled two small children, one alive and the other dead,—apparently for some time,—and, as medical aid was not at hand at the time, she had excessive and fatal hemorrhage. They had neglected to send for a physician until the children were born, and when I arrived she was in a condition alarming in the extreme. The surface was blanched, and her pulse scarcely perceptible, but the hemorrhage had stopped. She was unable to swallow, and exhibited the jactitation so common to similar cases. She was conscious till the end, and died a few minutes after my coming.

Autopsy, nine hours after death.—Body emaciated, but not extremely so. Surface of a very pale yellow. Brain not examined. Lungs and heart healthy, except a slight congestion of the former, due to labored breathing, from their confined thoracic space and the inability of the diaphragm to move because of the upward pressure of ascites. Abdomen enlarged and umbilicus protruded; when opened, about five quarts of a yellowish, viscid fluid flowed out. The *liver* was enlarged and congested, but showed no signs of abscess, nor the dense fibrous appearance due to scirrhus. It seemed more like a simple chronic congestion. The common bile-duct was much reduced in calibre, and the gall-bladder distended. Stomach healthy. The uterus was of the size we would expect at the sixth month of gestation; the tissue flabby and pale; the os was patulous, and the sinuses uncontracted. The kidneys were congested, and the ureters thickened and slightly distended. We had no opportunity to examine the urinary secretion.

PHILADELPHIA, 326 SOUTH SEVENTEENTH STREET.

ON HÆMATURIA.

BY W. D. MARTIN, M.D.,

Pennsylvania Steel Works.

IN vol. iii., on page 66, of the *Medical Times*, I reported a case of hæmaturia, bloody urine being the solitary symptom of the case. It was without pain or uneasiness, apparently without sufficient cause, and at that time, October 15, had continued for ten months in spite of the use of astringents and hæmostatics actively employed. The patient was then placed upon phosphate of iron and the valerianate of zinc, as there mentioned, and continued their use during three months, greatly to the improvement of his general health, but without particular benefit to the hemorrhage, which still continued.

In November he abandoned medicine entirely, and was advised to practise cold ablation of the parts twice every day; and he faithfully followed these directions for more than nine months, or until August, 1873, hæmaturia still persisting. The

gentleman in the interim was in active pursuit of business as before, taking much exercise and enjoying perfect general health.

On August 14, the discharge was apparently worse than ever, being, as he says, "formidable in appearance, and very bloody." Upon rising the next morning, however, the urine was clear, normal in appearance, and without blood; nor did blood subsequently reappear. And thus, being at that time on a visit to the same place (Monroe County, Pennsylvania) where he had acquired the affection, he finally left it there. He now considers himself well.

Referring to the source of this hemorrhage once more, I will observe that it was probably from varicose vessels. I will not attempt to explain the singular manner of its cessation, but will state, finally, that the diuretics and astringents employed in the case probably aggravated it.

October 30, 1873.

NOTES OF HOSPITAL PRACTICE.

UNIVERSITY OF PENNSYLVANIA.

SERVICE OF DR. H. C. WOOD,

Clinical Lecturer on Diseases of the Nervous System.

Reported by Dr. LOUIS STARR.

LOCAL CHOREA.

LOUISA —, 15 years of age, first applied for treatment at the dispensary on April 17, 1873. She has a healthy family history, and enjoyed good



health herself until five years ago, when she had scarlet fever. During convalescence from this, she had an inflammatory affection of the right side of her face, probably erysipelas in character, and associated with much swelling, redness, and pain. Shortly after the latter—which lasted two weeks—had subsided, she began to have contractions of the muscles of the left arm and leg, and a feeling of numb-

ness extending over the right side of the body. The muscular contractions were often severe enough to flex the forearm upon the arm, and the leg upon the thigh, and keep them so for a week or more: they occurred, however, only at intervals, and have been entirely absent for the past year. She began to menstruate ten months ago, and since then has been perfectly regular.

When she came under observation, although able to flex and extend the left arm and fingers and pronate and supinate the hand, there was some want of co-ordination, the movements being awkward and constrained, with a tendency to pseudo-chronic spasm, but without any trembling or jerking. When the arm was held out from the body, the fingers were bent backward, and the hand from time to time assumed various positions, according as the flexors or extensors predominated over each other.

She was ordered gr. xx of potass. bromid. three times

daily, with ung. belladon. applied to the arm. This treatment was continued from April 17 to June 12, when it was suspended, and she was directed to take three times daily one-fourth grain of argent. nitrat.

This was continued for some time without avail. Galvanization, both by the descending continuous current and the rapidly interrupted faradaic, was also tried, but did no good; and the patient was finally discharged unbenefited by treatment.

JEFFERSON MEDICAL COLLEGE.

CLINIC OF PROF. S. D. GROSS, M.D.

Reported by J. B. ROBERTS.

OVARIOTOMY FOR THE REMOVAL OF A MULTILOCULAR CYST.

THIS woman, 30 years of age, has suffered for nearly four years with a cystic tumor of the ovary, which has been tapped twice within the past six months, twenty-six quarts of fluid being drawn off at the first operation, and nineteen quarts at the second. The fluid has re-accumulated in large quantity since the last paracentesis, and she now comes to the clinic to have the tumor removed by ovariectomy.

The ovary is subject to various growths, both benign and malignant. Of these the most common is the cyst, which is unilocular or multilocular, and may be filled entirely by serous fluid or contain solid material in addition to the fluid. The diagnosis between these tumors of the ovary and other affections in the same situation is often exceedingly difficult, and there are recorded numerous instances in which the surgeon, after opening the parietes of the abdomen, has found to his dismay that there was no ovarian tumor whatever, but disease of the uterus, liver, or kidney.

Ascites may be mistaken for ovarian dropsy; but there are distinguishing features which will usually render the diagnosis sufficiently clear. In ascites the effused fluid is influenced by the patient's position, gravitating to the posterior part of the abdominal cavity when she is recumbent, and falling to the lower portion as the erect posture is assumed; but in dropsy of the ovary very little effect is produced by these changes. Then, again, the belly in ascites is distended generally, while in cyst of the ovary the effusion is primarily developed to one side of the median line, though it does gradually extend entirely across the abdomen; and, moreover, the cyst as it increases in size rises out of the pelvis and draws the uterus up with it, so that the neck of that organ may be almost beyond the reach of the finger introduced into the vagina. Another point of diagnostic value is the state of the health, which in peritoneal effusion is nearly always bad, since the dropsy is a manifestation of some organic disease. In ovarian trouble, however, the constitution frequently remains unimpaired for a considerable time.

Tumors connected with the liver and spleen, and enlargement of these organs, can be recognized by the fact that they increase from above downwards, and not from below upwards. A most extraordinary case is recorded in which renal cyst, or dropsy of the kidney, was mistaken for ovarian disease, and the woman's abdomen opened for the removal of the supposed cystic tumor of the ovary.

In the treatment of ovarian cysts, tapping is frequently resorted to as a palliative method, in order to lessen, by removal of the fluid, the mechanical inconveniences arising from its presence; but if the operation has been performed once it will usually be required soon again, as in a case where paracentesis was performed nearly sixty times within a year.

Since this woman has been tapped twice already,

and the fluid has so rapidly reaccumulated, it seems proper to attempt the extirpation of the cyst by ovariectomy, which, as the tumor appears to contain no solid matter, shall be performed by the short incision.

It is important to see that the bowels and bladder of the patient are emptied, and that the room is kept well warmed during the operation. An incision two and a half inches in length is then made through the linea alba, extending from the pubes upwards, which opening, if the adhesions are not extensive, will be sufficiently large to admit of the removal of the tumor, especially as its contents will be previously drawn off by the trocar. After the superficial incision has been made, a probe-pointed bistoury is introduced, and the muscular wall of the abdomen laid open, exposing the cyst to view, which proves to be multilocular, and when punctured gives a thick yellowish fluid of the consistency of soft soap.

I now seize the sac and endeavor to draw it out through the incision, rupturing with the finger or dividing with the knife the adhesions holding it to the adjoining viscera. It is firmly adherent to the omentum; and, as the attachment is very vascular, a ligature is placed around it before it is cut.

After the cyst is drawn through the opening, the pedicle by which the tumor is attached to the ovary is divided, having been surrounded by a clamp, in order that there may be no possibility of hemorrhage. After all the blood that has fallen into the abdominal and pelvic cavities has been thoroughly removed by perfectly clean sponges, lest peritonitis or pyæmia be induced, the stump of the pedicle, embraced by the clamp, is brought out at the lower extremity of the incision. The edges of the wound are then brought together by several points of interrupted suture, and four pins passing through the muscles and parietal peritoneum. It is necessary to leave an opening at the lower part of the wound, to insure drainage of the effused fluids, the retention of which might induce septicæmia.

An oiled compress is placed over the wound and held in position by long strips of adhesive plaster, after which a mass of cotton is laid on the abdomen and the patient's body surrounded by a broad bandage of flannel. The bowels will be locked up by opium, and the woman kept perfectly at rest, in a room well warmed and free from draughts of air, with her legs flexed on the pelvis, to relax the muscles and thus prevent tension upon the contents of the abdomen. If effusions of a serous or purulent nature occur, the pelvic cavity must be washed out with tepid water and chlorinated soda or permanganate of potassa by means of a syringe, lest the accumulation of these fluids within the pelvis set up inflammation or induce pyæmia.

TRANSLATIONS.

SYMPTOMATOLOGY OF MYELOGENIC LEUKÆMIA.

THE pathology of leukæmia (Prof. F. Mosler: *Virchow's Archiv*, 1873) has of late been made much richer by the cases observed by Neumann and Waldeyer. In the case of the former a characteristic alteration of the marrow of the bones was observed, and these observations were confirmed by the case of the latter observer, in which there was a diffuse hyperplasia of the marrow. In neither of these cases was it possible during life to note the symptoms more definitely; but within a short time Prof. Mosler has had a case of leukemia under his observation, in which, at the autopsy, he found an affection of the marrow, as if

resulting from purulent osteomyelitis, extending over the entire skeleton, and during the life of the patient symptoms indicative of this disease had been noted by him.

The history of the case was of particular interest, as it would lead to the supposition that the primary disease was not one of the bones, but of the spleen. The patient was a laborer, aged forty-four, who had suffered from intermittent for a long time, followed at last by pains in the left side, where also a tumor had been observed. The leukæmia appears to have started as the result of an injury in the region of the spleen. The patient, in the act of mounting a horse, fell, his left side striking upon the pommel of the saddle. The injury was severe enough to induce an inflammatory condition of the spleen, and this was followed by the leukæmia. At the time he was admitted to the clinic the patient presented a typical case of splenic leukæmia. The splenic tumor filled more than half the abdominal cavity. The lymphatic glands were not involved. A drop of blood when examined under the microscope contained more than one-third white corpuscles. The reaction of the blood was alkaline. The patient presented febrile symptoms of a high grade in connection with pains in the splenic region, pointing to a state of chronic inflammation. One symptom—great tenderness over the sternum, so that the least movement gave rise to intense pain—was noticed by Prof. Mosler for the first time in this case. At first he looked upon this tenderness as a nervous symptom; but later he noticed that great sensibility of the thorax was present at points under which swollen lymphatic glands were situated. This idea was strengthened by the fact that the patient had a cough with expectoration. The autopsy revealed the cause of this condition to be the disease of the bone existing in the sternum. Death took place suddenly, and was caused by a profuse hemorrhage of the stomach, due to follicular ulceration of the mucous membrane of that organ.

In opening the thorax at the post-mortem examination the sternum was broken near the manubrium, and a yellow substance, looking like pus, poured out from the broken surfaces. When the sternum was sawn through, the interior presented a dirty grayish-white hue, and in the body of the bone were found cavities, some of the size of a pea. Towards the lower end was one of the size of an almond, which gave the impression of an abscess in the bone. The cortical portion of the bone was intact over all the cavities. The marrow of a vertebra from the lumbar region, and also that of a femur, presented the same dirty yellow color as that of the sternum. The vessels of the marrow were in some places found crowded with white blood-corpuscles. The external part of the bone and the periosteum were normal. A more accurate examination revealed a hyperplasia of the entire marrow of the bones.

The corpuscles in a state of transition from white to red, described by Neumann, could not be found in the body. The spleen presented the usual characters of leukæmic tumor of that organ: it was very hard, had grown fast to the abdominal walls, and contained numerous spots which had been centres of inflammation. No anomalies were found in the lymphatic glands. The case, then, was one of leukæmia with secondary involvement of the marrow of the bones, and it for the first time demonstrates the existence of certain symptoms during life in myelogenic leukæmia. In this case the disease gave evidence of existence by a marked tenderness over the sternum. The hollow bones, however, during life, gave no symptoms that would induce a suspicion of the disease existing within them.

WILLIAM ASHERIDGE, M.D.

ACTION OF THE MORAL NATURE ON THE PHYSICAL.

UNDER this title, Dr. Cornette (*Annales Médico-Psychologiques*, March, 1873) gives two very interesting cases in which entire loss of hair, with change of voice, resulted from depressing emotions.

The first case was that of a perfectly healthy gardener, forty-five years of age, who, after undergoing considerable mental disquietude, through fear of impending poverty, for several weeks, found his hair suddenly growing white and at the same time falling out.

In a few days his head became almost completely bald, the few hairs which still remained in the form of a circle around the temples and occiput being straight, fine, sparsely scattered, and white as snow. His hair had previously been curly, abundant, and quite black. His beard rapidly became affected in a similar manner, and later the hair had entirely disappeared from all parts of the body.

At the same time, his voice, which before had been strong and full, became quite feeble and low in tone, and his whole appearance was that of a man of seventy-five. His health, however, was perfectly good.

Five years later his condition was nearly the same. He was quite melancholy, and but a few hairs, of a downy nature, remained on his body. His voice was still feeble.

The other case was that of a gentleman, fifty-six years of age, in political life and much harassed by public and domestic anxieties.

One morning on awakening he found a large quantity of hair in his night-cap, and, running his hand through that which remained on his head, it came out by handfuls.

Within a very short time he had lost not only all the hair on his scalp, but also that on the chin, and, finally, on all parts of the body.

After six years this gentleman's condition remained the same. His skin had returned to the smoothness of infancy: one would never believe it had been otherwise.

His general health remained good, but, like the previous case, his voice was nearly lost at first, and even after several years was still quite feeble.

A. VAN HARLINGEN, M.D.

TRAUMATISM IN THE INSANE.

DR. CHRISTIAN (*Annales Médico-Psychologiques*, July, 1873) remarks that it was formerly thought the insane did not suffer from cold, heat, or injuries. Observation, however, has proved this idea an incorrect one.

Some authors have maintained an antagonism between insanity and various diseases, and, on the other hand, that insanity predisposes to other disorders.

Without taking up the subject of the relations of insanity to disease in general, Dr. Christian confines himself to the consideration of traumatism in the insane, and adduces a number of cases of injuries of various kinds in such patients. His conclusions are as follows:

Wounds.—Dr. Christian's observations confirm those of others, to the effect that, whatever the form of their mental affection, traumatic lesions in the insane are easily cured. Sometimes the most grievous wounds heal by first intention.

Burns.—These result as favorably as the foregoing.

Fractures.—Although it has been stated by some that fractures in paralytics are recovered from slowly, yet Dr. Christian's experience leads him to believe that, unless when influenced by accompanying depression, they get well with the usual rapidity.

Bedsore.—Dr. Christian's observations incline him to the conviction that bedsores are no more frequent among the insane than among fever or other patients confined to bed under similar circumstances. Of course such sores are more frequent among paralytics, condemned as they are to a prolonged decubitus, and having incontinence of urine as a usual accompaniment.

Dr. Christian further remarks that many cases might be cited where grave wounds have constituted a critical phenomenon of delirium.

It is concluded that the profound modification which insanity impresses on the organism is not of a nature to cause wounds to take on a bad character.

That state of comparative insensibility to pain often noticed in insane persons, Dr. Christian thinks, is only apparent, and is dependent for the most part on the concentration of the faculties on fixed predominant ideas.

It would be interesting to collect facts relative to the results of surgical operations on the insane; but no materials for that purpose exist as yet.

Finally, it is concluded that, taking into consideration the advantages of fresh air, etc., which many insane asylums present, their patients are cured neither more nor less quickly than other wounded persons.

A. VAN HARLINGEN, M.D.

EXTIRPATION OF THE RECTUM.

THE extirpation of the rectum, with the formation of a musculo-cutaneous perineal flap, according to Hueter (*Deutsch. Zeitschrift f. Chirurgie*) is a method by which the difficulties and dangers incident to the operation as usually performed are avoided. The usual dangers, as enumerated by him, are the following four: hemorrhage from the hemorrhoidal arteries which are necessarily cut, the difficulty of their ligation, possible injury to the peritoneum, and, finally, incontinence of feces.

The first act in the operation consists in the formation of a tongue-shaped flap, with the free convex end looking towards the scrotum, the base being bounded by a line joining the tubera ischii. The sphincter ani must next be separated, and the muscular tissue and mucous membrane of the rectum cut obliquely through at a point one centimetre above the anus, so that the entire ring of the anal opening is contained in the flap, and this is then thrown back. The bleeding vessels having been ligated, the extirpation of the gut is to be proceeded with. The edges of the wound are to be united with sutures,—those in the back part of the wound being first applied,—and the flap is then to be drawn into its old place and fastened by stitches. The after-treatment is made much easier by the fact that the feces traverse the normal canal and do not soil the edges of the wound. This method of operating was tried in two cases: the first patient was a drunkard, who, after the operation, was attacked with delirium tremens and finally died of pneumonia; the second recovered without any bad symptoms, and left his bed two weeks after the operation.

WILLIAM ASHBRIDGE, M.D.

DIVISION OF THE SPINAL CORD IN THE NECK (*Indian Medical Gazette*, September 1, 1873).—N. B. Baillie records the case of a woman who lived for six hours after receiving a blow with a hatchet which cut through the third spinous process and the back part of the fourth cervical vertebra, dividing the spinal cord completely, and penetrating into the body of the vertebra in front of the spinal canal.

PHILADELPHIA
MEDICAL TIMES.
 A WEEKLY JOURNAL OF
 MEDICAL AND SURGICAL SCIENCE.

The Philadelphia Medical Times is an independent journal, devoted to no ends or interests whatever but those common to all who cultivate the science of medicine. Its columns are open to all those who wish to express their views on any subject coming within its legitimate sphere.

We invite contributions, reports of cases, notes and queries, medical news, and whatever may tend to increase the value of our pages.

All communications must bear the name of the sender (whether the name is to be published or not), and should be addressed to Editor Philadelphia Medical Times, care of the Publishers.

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SATURDAY, NOVEMBER 15, 1873.

EDITORIAL.

PROFESSIONAL ADVERTISEMENT.

"WHERE are you going to draw the line?" said a friend to us, after reading our editorial of last week. To such inquiries we now reply, once for all, We do not intend to draw the line at all. That is not our business. A medical journal is not an autocrat, that it should settle what rules are to govern the profession. The line is drawn for us, and drawn sharply, by the Code of Ethics of the American Medical Association.

Though it be not a right of journalism to prescribe rules and make regulations, yet it is in its province to see that they are lived up to. More than this, as the representative of the whole profession, it is the bounden duty of an independent journal, so far as lies within its power, to see that no injustice is done to any portion of the profession,—that all have equal chance in the struggle for existence.

The point we want especially to raise to-day is the injustice of allowing Dr. Sly to covertly advertise or to be advertised because he is connected with some hospital, whilst Dr. Straightforward is hooted at and denounced because, not having the same opportunities, he advertises in a different and more open manner.

To this, when stated broadly as a general principle, we suppose no one will object. General principles hurt no one, and their enunciation usually is as sounding brass and a tinkling cymbal.

It is the application, not the mere dead lash, that makes the smart, but it is the smart, after all, that causes the boy to mind his steps. The lash—the general principle—without the application, he little cares for. Now we propose to make the application; but, before doing it, we want to deny emphatically and finally that any *individual* is being attacked. If any feel the random stroke, he probably deserves it: if so, provided he do not complain, he may comfort himself by the assurance that neither we nor his colleagues know that he has been struck.

The first specific evil of which we propose speaking is a practice of the renowned Pennsylvania Hospital. Day after day there appears in the public press an advertisement not merely stating that the wards are open to the sick, but giving also in full the names and residences of the physicians and surgeons on duty. It is against the continuance of this that on behalf of the general profession we desire to protest.

The first reply to our objection to it will no doubt be, The staff does not do it, the managers do it; the staff is not responsible for the actions of the managers. We acknowledge that there is force in this. Yet we doubt if the force is any better than weakness. Does any one suppose for a minute that if the medical staff of the hospital were officially to state to the board that to have their names and places of residence published in the daily papers was derogatory to their professional dignity and injurious to their professional status,—does any one suppose that if this were done the board of managers would prove such a set of churls as to refuse to modify their public cards? We certainly do not. "Shall not suffer to be," says the Code.

Again, it will be said, Pennsylvania Hospital has advertised in this way from time immemorial.

We cannot see, however, what this has to do with the main issue. Let us not darken counsel with words. The sole question is, "Is, or is not, the publication of the Pennsylvania Hospital's card such an advertisement of the physicians in the daily press as shall redound directly to their personal advantage?" Moreover, it is very possible that a custom harmless in a small community will be a gross injustice in a large one. When there were but fifty thousand people, but thirty thousand possible desirable clients, in our city, a man who held a public medical position was, of necessity, known by almost everybody. But since the multitude has swollen to a million, connection with a public hospital can, in a legitimate manner, only bring a physician before a mere fraction of the people. A stranger in a

village is known in a week of all men; in London he is as a speck floating on the Atlantic.

Hence, as a community increases in size, the advertisement in the public press of a physician, as a man of attainments, becomes of more and more value. Moreover, as the density of population increases, the struggle for existence becomes more and more intense. Advantages which in a small, scattered community may amount to very little, in the dense centre may make the difference between poverty and fortune, success and failure.

It was bad enough when our city was smaller, but to-day it is a hundredfold more unjust, to allow one man's name, under cover of a board of managers, to be placed before the people, and to forbid the appearance of that of another because he has no board of managers behind which to shelter himself.

A stranger comes to the city,—feels ill,—has heard, perhaps, of the Pennsylvania Hospital, for the fame of it is all over the land,—knows not what physician to go to, but remembers to have seen the card of the hospital in the morning paper, and, looking it up, sends for the physician or the surgeon advertised therein.

This is no improbable fancy sketch; but a few weeks ago a very analogous incident came under our notice.

In a certain stratum of society in our city, a "head doctor" of "Pennsylvania Hospital" is almost a medical demigod; and who can tell how many office-visits the holders of these envied positions yearly owe to the advertisement of them, paid for by the contributors of the hospital?

We do not want to be misunderstood. We do not charge the medical staff of the hospital with in any way instigating or being responsible for the practice. It is an old but a very bad custom, far more honored in the breach than in the observance,—a custom which becomes more and more contrary to the spirit of the Code of Ethics,—one which is opening the door for a flood of general medical advertising,—a custom which must be abandoned if our Code of Ethics is to be maintained in its purity.

We do not deny that the practice confers some advantage upon the hospital,—facilitates, perhaps, the admission of patients, and increases the fame of the institution. We do deny that it is in any sense necessary to the hospital. Let the card be put in simply with the position of the hospital and the daily hours at which the staff is in attendance for the purpose of admitting patients, and will any one assert that the sick or the wounded will not be able

to gain admission? Is the fame of the institution so slight that its clientèle would diminish even if it did not advertise at all?

It cannot be. The importance of the practice to the hospital must be very slight. Its value to the staff may be great; it is notorious that a position in the hospital insures success in practice; and who can tell how much of that success is due to this daily advertisement? The harm done to the general profession is, however, also very great, the influence for evil reaching much farther than appears at first sight. But we cannot trace this to-day; our columns are too crowded by other matter. In our next issue we shall attempt to do so, and to show that the only correction for the growing evil is the abandonment of this practice by the Pennsylvania Hospital. Will the medical staff request it of the general board?

IT is some comfort to see that others are worse off than yourself. According to the following, which we extract from an exchange, the Philadelphia Hospital is not, after all, the worst in the world:

"At Benguela, in Angola, says the *Correio do Sul*, the military hospital is in such a state that wolves have entered it in search of human flesh. The *Correio Medico de Lisboa*, commenting on this, says, 'Speaking plainly, our colonies, as regards the hospitals, are for the most part the most perfect examples of carelessness, indifference, and contempt of humanity that can possibly be found.'"

PROCEEDINGS OF SOCIETIES.

PHILADELPHIA COUNTY MEDICAL SOCIETY.

A CONVERSATIONAL meeting was held October 8, 1873, at 8 o'clock P.M.,

VICE-PRESIDENT DR. H. ST. CLAIR ASH in the chair.

Dr. WASHINGTON L. ATLEE referred to an interesting and unusual case that came under his notice October 5, 1873. The patient was a maiden lady, aged 52 years. At his first interview he found her suffering the most intense agony, particularly in the lumbar region. She had been occupying a sitting position on the edge of a sofa, with her feet on the floor, for several days and nights, not capable of being moved or of lying down. Her breathing was oppressed and frequent, pulse accelerated and small, and the stomach rejected everything as soon as taken. The abdomen was distended much beyond the size of that of a woman at full period of gestation, and was as tight as a drum. There was dulness on percussion everywhere, and fluctuation was sufficiently distinct. Not being able to change her position, Dr. ATLEE could not make the examination more satisfactorily; but in order to relieve her intense suffering and impending danger he immediately tapped her, and drew away thirty pints of fluid resembling spring-water and

uncoagulable by heat or nitric acid. The upper portion of the abdomen sank in after paracentesis, but there still remained a considerable prominence in the hypogastric region.

All the distressing and alarming symptoms subsided with the tapping, and the patient was placed comfortably in bed.

Two days after, Dr. ATLEE made a careful examination of the patient. He could distinctly make out a tumor occupying the whole hypogastric region. It was irregular in shape, more or less elastic at different points, movable *en masse*, and resembled a multilocular ovarian tumor. The pelvis was free, the uterus quite movable independent of the tumor, and the sound was admitted three inches.

The diagnosis was a multilocular ovarian tumor, complicated with a cyst of the broad ligament.

Dr. ATLEE received the following history from her :

Menstruation commenced at the age of seventeen, and continued to be regular up to the age of fifty. At times it was painful, and until twenty years of age it was profuse, sometimes clotted. In the spring of 1864 she was prostrated by severe flooding, which she thinks was induced by family affliction. This tendency to hemorrhage continuing, she came Eastward to seek professional aid. She respectively sought the best medical and surgical advice in Pittsburgh, Newark, and New York, and the uniform opinion was that she had a uterine fibroid tumor with a concealed polypus. A very small polypus finally extruded from the lips of the uterus, which she detected herself, and after its removal the hemorrhage ceased. During this time, in the summer of 1865, she noticed that she began to "bloat," but subsequently by the use of pareira brava the enlargement disappeared through copious discharges of urine. The swelling of the abdomen returned, and gradually continued to increase in spite of treatment. She finally came to Philadelphia, to be treated by certain female electricians who gave her every assurance of a perfect recovery. Her general health was somewhat improved by the treatment, but the local disorder seemed to have been aggravated. For the last six weeks her distress has been great, and for the last three or four days and nights it has been insufferable. It was at this stage of her illness that Dr. ATLEE first saw her.

Dr. ATLEE said that this was the second instance he had met with of a cyst of the broad ligament having been accompanied with such extreme suffering and danger. In the first case, as in this, relief followed immediately after tapping.

These cysts of the broad ligament, in Dr. ATLEE'S opinion, rarely involve the ovary, and frequently are curable by tapping alone, particularly if a large trocar be used. He has seen cases of these peritoneal cysts, after having been tapped, followed by ovarian tumors, but he does not remember to have met with a case similar to the one above reported, of multilocular ovarian tumor and cyst of the broad ligament conjoined.

In this case Dr. ATLEE advised the patient to avoid an operation so long as the ovarian tumor remained quiescent and the peritoneal cyst did not fill.

Dr. HAMILTON said the history of the case just related by Dr. ATLEE was a gratifying one, as it afforded at least a ground for hope that some of the necessarily dangerous and fatal operations resorted to in such affections might be dispensed with. Might not the great improvement after the tapping be ascribed to the removal of tension,—just as we sometimes see, in cases of dropsy attended with almost entire suppression of the secretion of urine, that a few punctures in the lower limbs, by releasing pressure upon the absorbent system and secretory action of the kidneys, are followed by very copious discharges of urine?

Dr. ATLEE, in reply to Dr. HAMILTON, observed that

in all cases of dropsy, whether of the abdomen, the broad ligament, or the ovary, tapping was followed by an increased action of the kidneys for twenty-four or forty-eight hours.

REVIEWS AND BOOK NOTICES.

PROCEEDINGS OF THE TWENTIETH ANNUAL MEETING OF THE MEDICAL SOCIETY OF THE STATE OF NORTH CAROLINA, HELD AT STATESVILLE, MAY, 1873. Pamphlet, pp. 81. Raleigh, Stone & Uzzell, 1873.

The proceedings of State medical societies are usually not very interesting except to those who participate in them; and were it not for the very admirable addresses of Drs. Whitehead and T. F. Wood, and the discussion to which the remarks of the latter gave rise, this pamphlet would form no exception to the general rule. Dr. Wood takes very strong ground in favor of the restorative treatment of disease, and supports his views by arguments which, although they seem to us incontrovertible, are not sufficiently cogent to convince Dr. Satchwell, who appears to retain, notwithstanding the recent advances in therapeutics, the lively faith of the preceding generation in the efficacy of mercury and the lancet in the treatment of acute inflammations. This gentleman reiterates in his remarks the same opinions as he expressed in an essay which he read before the Society at its meeting in 1870, and which were severely criticised by Dr. Anstie in *The Practitioner* for December of the same year. If he has read this review, we are sorry to say he has not profited by it, for not only does he still cling to doctrines the fallacy of which has long since been exposed, but he also weakens whatever force his arguments may have by the contemptuous way in which he refers to those who differ from him: classing them together as Todd, Bennett & Co.,—a firm which is, at all events, composed of many of the most scientific physicians and best practitioners of the day. The discussion on the other side was well sustained by Dr. W. A. B. Norcom, whom the Society subsequently chose its president for the ensuing year. Among the papers read is one in which "A Case of Extra-Uterine Pregnancy of Sixteen Years' Standing" is reported. The details of the case are not so fully given as we could wish, but it appears that sixteen years before the patient came under the reporter's (Dr. R. F. Lewis) notice "she became pregnant, and in the usual time gave birth to a child. Soon afterwards she discovered a lump in her right side about the size of a quart cup; this remained without increasing or diminishing in size until about six months before I [the reporter] saw her; she was sitting by the fire, and for some purpose jumped up hurriedly, when she heard something tear in her side. Soon she discovered that the lump was gone, and in a few weeks noticed that her abdomen was increasing in size." She subsequently gave birth to four or five children,—boys and girls. Her condition was discovered during the operation of tapping, which was rendered necessary by the accumulation of fluid in the abdominal cavity. A liquid resembling pus was drawn off, in which was discovered a large quantity of hair. Subsequently an incision three inches in length was made through the abdominal walls, when three rolls of hair were removed, which, after being washed and thoroughly dried, weighed a fraction over four ounces. Some of the hairs are said to have been six or eight inches long. Upon inserting his finger into the abdominal cavity, Dr. Lewis felt a completely-formed but small child in a perfect state of preservation. The husband of the patient objecting to the removal of the child, the abdomen was emptied of a very thick fluid,

--too thick to pass through the largest canula,—and the edges of the wound were brought together with sutures. Union soon took place. In addition to this paper there is a report on "Retroversion of the Uterus," by Dr. R. L. Payne, of Davidson County, and a paper containing the histories of four unusual cases, contributed by Dr. H. O. Hyatt, of Kingston.

THE PRINCIPLES AND PRACTICE OF MEDICAL JURISPRUDENCE. By ALFRED SWAINE TAYLOR, M.D., Lecturer on Medical Jurisprudence in Guy's Hospital. Second Edition. Philadelphia, Henry C. Lea, 1873.

The goodly volumes before us are the chef-d'œuvre of their author, so well known by his smaller works on poison and in this country especially by the hermaproditic American book which we noticed some time since in our columns. The present treatise consists of two volumes of between seven hundred and eight hundred closely-printed pages, and, as the style adopted is concise, contains sufficient space to exhaust the science of which it treats; and we must say that Dr. Taylor has availed himself to the full of the opportunity offered. The author has in this edition considered more fully the general subject of medical evidence, and added also to other parts of the book, especially to the chapter on Wounds and Personal Injuries. The value of the book has also been enhanced by the introduction of many new references. In concluding the announcement, which ought to be all that the present edition needs to insure its sale, we cannot refrain from expressing a desire that books like the present may be more widely read by the profession: if this were so, we might be spared some of the disgraceful court scenes which have brought so much obloquy upon us. The binding of the work is fairly substantial, and very neat; the typography is of that attractive style which indicates English manufacture. If we mistake not, the publisher has imported sheets rather than reprinted the book,—a most commendable procedure, as it is probable that under such arrangement the author gets his crumbs.

EXPERIMENTAL RESEARCHES ON THE CAUSES AND NATURE OF CATARRHUS ÆSTIVUS. By CHARLES H. BLACKLEY, M.R.C.S. Eng. Small 8vo, pp. vii., 202. London, Baillière, Tindall & Cox, 1873.

Judging from the number of new publications to which it gives a title, periodical catarrh must be upon the increase both in this country and Great Britain; and, as our own observation of the number of cases met with confirms this opinion, we think any attempt to throw light upon the subject is entitled to the attentive consideration of the general practitioner.

Mr. Blackley, like most of those who have written upon this malady, is a sufferer from it himself; and it is to the persistence with which its claims to attention have been urged upon him that we owe the lengthy series of experiments upon its causes which are contained in this little volume.

The observations of other writers upon annual catarrh are first reviewed, and their opinions carefully analyzed, after which the author's own experiments are detailed at some length. Through these details it is unnecessary to follow Mr. Blackley, it being sufficient to say that the amount of the catarrhal symptoms was ever found to correspond closely with the amount of pollen found floating in the atmosphere, as demonstrated by the microscope, and that both reached their highest development in the vicinity of grass-fields during the time of hay-making. Mr. Blackley does not hold, with Bostock and others, that heat and light exert an influence upon the symptoms, but regards pollen, and pollen alone, as the exciting cause, going so far as to propose calling it *pollen catarrh*.

Treatment by drugs is of little avail, the only effect-

ual remedy appearing to be the removal of the patient into a region where vegetation is scanty, to which end some of the British watering-places have been tried and are recommended by Mr. Blackley. Our author does not appear to have seen Dr. Wyman's book upon autumnal catarrh, where the advantages of a residence among the White Mountains are detailed, but speaks of Fire Island as a well-known resort of sufferers from this complaint on this side the Atlantic. Long Beach, opposite Tuckerton, a narrow strip of sand upon the New Jersey coast, has also proved of much benefit to many cases within our own knowledge.

Mr. Blackley, indeed, seems only to know of the summer form of the complaint, while that occurring in the fall is of equal frequency in this country, and the existence of which must lead to a modification of his views, which may be thus stated: in a person predisposed by individual peculiarity, often of a gouty family, almost always in the better walks of life, pollen of various kinds produces an irritation of the mucous membrane of the eyes and the whole respiratory tract of greater or less intensity, which is aggravated by light, heat, and sudden atmospheric changes, and this irritation may vary in degree from a slight and trivial catarrh to a violent bronchitis with the most intense dyspnoea.

In conclusion, Mr. Blackley says that summer catarrh appears to be increasing, and accounts for the fact by the growth of luxury which attends the rapid concentration of the population of the United Kingdom within towns, the growth of the manufacturing at the expense of the agricultural interests.

DISEASES AND INJURIES OF THE EAR. By W. B. DALBY, F.R.C.S., M.B. CANTAB., Aural Surgeon to St. George's Hospital.

This book, of little more than two hundred pages, is divided into eleven short lectures on the more important features of "Diseases and Injuries of the Ear." Among the lectures we would single out the fifth as the best, if called upon to make any distinction; but they are all very good, and contain the substance of the diagnostic and therapeutical knowledge of the day so far as it pertains to otology. The anatomical and physiological facts are but lightly touched upon; we suppose, because the author relies upon a preliminary knowledge on the part of those who constitute the class at St. George's Hospital.

In the fifth lecture, already mentioned, the diagnosis and treatment of non-purulent catarrh of the middle ear are carefully and clearly set forth, and furnish, therefore, a very valuable guide to any one who has to treat a case of this disease.

The subject of aural polypi is very thoroughly treated in the seventh lecture, accompanied by some "beautifully executed drawings, showing the structure of these bodies, by Dr. Whipple." Under this head we notice that Dr. Dalby recommends the use of "fine fishing-gimp" instead of wire in the formation of the snare in Wilde's instrument, and after the removal of the polypus.

Dr. Dalby says, "I am in the habit of using chloroacetic acid on a small camel-hair brush, and apply it very freely. At the same time, care must be taken not to touch any part of the meatus."

Those parts of the book which relate to mastoid diseases, to the obscure nervous affections of the auditory apparatus, both acquired and inherited, and to deaf-mutism, are full of interest; but we think more should be said concerning mastoid disease and its treatment, even at the expense of space which is given to deaf-mutism. So much has been done for the relief of mastoid disease, and it now constitutes so important a part of the aural surgeon's work, that no book on diseases of the ear is complete without a very thorough

review of the diagnosis and treatment of this important and tractable malady, while deaf-mutism hardly falls within the province of the aural surgeon, at least not to the exclusion of more remediable troubles of the ear.

The great importance of chronic discharge from the ear is acknowledged and most forcibly enjoined in the following words, which close the eighth chapter:

"But inattention to the discharge may at any time place the patient in a position of great peril. For this reason I believe that a discharge from the ear is regarded by insurance companies as an element against granting a policy, or, at any rate, demanding an increased premium. I can only say that, if it is not so regarded, it would be, if the companies consulted their own interests."

We can but terminate this short sketch by saying that the perusal of this book has been not only instructive but extremely pleasurable, and we are glad to acknowledge the addition of such a volume to the literature pertaining to otology. C. H. B.

GLEANINGS FROM OUR EXCHANGES.

HOW COLD-BLOODED ANIMALS ARE AFFECTED BY LOW TEMPERATURES.—Dr. Dönnhoff has been making some experiments on this subject, which he describes in *Reichert's Archiv*. He put bees, spiders, and flies on the frozen ground in his garden, under wire covers, the temperature on the ground being $-1\frac{1}{2}^{\circ}$ C. The bees were soon apparently dead, the others still moved after five hours. All were then brought into a warm room. The bees did not revive, but the spiders and flies were in a few seconds lively again. On other days the thermometer stood at -3° . The spiders soon ceased to move, while the flies weakly moved their feet the whole time of exposure, eight hours. In the warm room it was found that the spiders were dead; the flies soon flew about. Next evening, at eight, the thermometer showing $-3\frac{3}{4}^{\circ}$, flies were put in the garden; at eight the following morning the thermometer stood at $-6\frac{1}{2}^{\circ}$; the flies were apparently dead, but when brought into the room soon revived.

A few days afterwards, the flies were put in a small glass, $1\frac{1}{2}$ inches long and half an inch broad. This was sealed and put in a freezing-mixture of snow and salt, the thermometer in which showed at first $-6\frac{1}{2}^{\circ}$, and after four hours $-3\frac{1}{2}^{\circ}$. The flies kept in the glass all this time were brought into the room, and soon flew about. They were next subjected to a freezing-mixture of -10° , the thermometer in three hours showing -6° ; but this killed them.

Leeches were placed in a temperature of $-1\frac{1}{2}^{\circ}$. In an hour they were frozen stiff (but not hard), like pieces of meat which were put beside them. The water in the animals was not all frozen, a concentrated solution (according to physical laws) remaining liquid. If the leeches were cut through with scissors, the section appeared whitish, from ice. Brought into the room, the animals moved about after a quarter of an hour, and, when seized, balled themselves like healthy leeches. Other leeches, kept three hours in a temperature of $-1\frac{1}{2}^{\circ}$, afterwards revived, but could no longer crawl, and died in a few days. Leeches kept a few minutes in a cold mixture at $-6\frac{1}{2}^{\circ}$ were dead.

Silkworm eggs were exposed on the frozen ground twenty-four hours, the temperature varying from -2° to 1° ; others to a temperature varying from 4° to $-2\frac{1}{2}^{\circ}$; others to one varying from $7\frac{1}{2}^{\circ}$ to 6° ; others were placed in a small glass, and this in a freezing-mixture of -21° , in which they remained five hours, the thermometer at the end of this time showing -15° . The half of each por-

tion of eggs Dr. D. put in small linen-covered flasks, and the flasks in a bag which he carried on his breast during the day, and took into bed with him at night. In a few weeks active worms came out of all the eggs. The other portion of the eggs he had placed in a warm room; some weeks later, worms came out of these also.

These experiments show that cold-blooded animals behave like plants with regard to freezing temperatures. They die like these at different freezing temperatures. The honey-bee dies at -1° ; the spider at -3° ; the flesh-fly survives a temperature of -6° ; the silkworm egg one of -21° . And as there are plants in which the water may be frozen without their dying, there are some animals in which this occurs. In leeches a part of the contained water may be frozen; the silkworm egg may be frozen solid, without life being extinguished.

In the spiders and flies exposed to freezing temperature a part of the water was frozen; but, as contraction of the muscles still took place in a temperature at which pieces of meat were frozen stiff, it is improbable that their muscles were frozen. The freezing of the water in leeches puts an end to all motion. They move at 0° , but at $-1\frac{1}{2}^{\circ}$ are quite still.—*Boston Journal of Chemistry*.

ON INFLAMMATION OF THE THORACIC DUCT.—Dr. Chouppe, of Paris, has just published a thesis in which he has collected five cases of the above rare and, as yet, not well-known affection. The five cases collected by Dr. Chouppe are the only ones hitherto placed on record. In three of the cases the inflammation was secondary, and in two primary. In order to distinguish this latter form from the former, Dr. Chouppe has conducted a series of experiments on animals. The points brought out by the two cases and by the author's experiments are very interesting. In both cases the inflamed thoracic duct had thrown a quantity of pus into the general circulation through the subclavian vein, and it might be said that the patients had had a sort of pyæmia through an internal course; yet, during life, typhoid fever, meningitis, and articular rheumatism were successively suspected, whilst purulent infection was not even thought of. Another point of interest was the obliteration of the subclavian vein in one of the cases; it could only, however, have occurred during a late period of the disease, as symptoms of pus in the blood had been previously observed. Notwithstanding the great importance of the thoracic canal, as conveying all the chyle produced by digestion, and the most part of lymph, no disturbance in the digestive organs or in the functions of nutrition was observed. Moreover, Dr. Chouppe stated the existence of pulmonary infarctus, caused, according to him, by the pus producing embolisms. The other symptoms were redness of the surface in various parts, inflammation of the sheaths of tendons, and of several joints. In both primary cases the onset of the disease was sudden: in one case it came on with violent pain in the stomach and intense fear; in the other, with a violent and protracted fit of rigor. In the two cases these symptoms were followed by high fever, prostration, loss of strength and flesh.

Dr. Chouppe has arrived at the following conclusions on the important questions which he has investigated: Primary inflammation of the thoracic duct does exist; it is attended by general symptoms of purulent infection and by local symptoms; it cannot be diagnosed as yet during life by the help of known symptoms, but its presence may be suspected; it is likely that it has been sometimes overlooked, and that it occurs occasionally.—*Medical Times (Canada)*.

SCLERODERMA.—Dr. Arthur Van Harlingen, in a concise and well-written paper upon this subject, in the *American Journal of Syphilography and Derma-*

tology, October, 1873, relates a case which came under his observation, and also makes an analysis of scleroderma in general. The object of the communication is to point out the clinical features of the disease and to show its distinctive character in opposition to those views which would connect it with other affections of a more or less similar character.

The following definition is proposed:

"Scleroderma is an affection of the skin, characterized by diffused symmetrical hardening, and generally accompanied by more or less pigmentation. Beginning in some particular locality, without febrile disturbance, swelling, or œdema, the induration spreads with greater or less rapidity over a considerable extent of surface. The affected parts fade gradually into those which remain healthy, without any distinct line of demarcation, and they are on a level with the general surface, neither raised nor depressed, and contain no tubercles or other elevations. The temperature of the affected surface is either normal or slightly depressed. The general sensibility, as well as the functions of the glands, are unaffected, save in the advanced stages of the most severe cases. It runs a chronic course, uninfluenced, or nearly so, by therapeutical applications, and has no tendency to a fatal termination.

"Pathologically, the disease consists essentially in a great increase in the fibrous elements of the corium and papillary layer, decrease of fat in the subcutaneous connective tissue, and deposit of pigment in the lower layers of the epidermis and in the rete."

This definition, Dr. Van Harlingen holds, will exclude the well-known case of Rasmussen, which has been frequently quoted as one of scleroderma, but which, it is maintained, is wanting in most of the characteristic features of scleroderma.

Scleroderma and the keloid of Addison are separated and considered as entirely distinct diseases.

SHOCK AND SYNCOPE (*The Practitioner*, October, 1873).—Dr. T. Lauder-Brunton, in an able paper, reviews the causes, symptoms, pathology, and treatment of shock and syncope. He believes painful impressions,—more especially extensive burns,—injuries to bones, and, above all, injuries to the abdominal viscera and genitals, to be the principal causes of shock, which is usually attended with pallor and coldness of the skin, weak pulse, oppressed and sighing respiration, dilated pupils, and sickness. There are two chief factors in the production of shock: first, the stoppage of the heart from the paralyzing influence of a sudden and violent injury to the nerves, and second, as a result of the same influence, dilatation of the vessels, particularly those of the abdomen. These two enable us to account for all the observed symptoms,—the weak pulse, the low arterial tension, the pallor and coldness of the surface, etc.

Syncope probably depends chiefly on dilatation of the arterioles, and its duration is less than that of shock, because of the greater contractility of these vessels than of the veins.

In the treatment of shock we endeavor to counteract the feebleness of the heart by stimulants,—one of the most powerful of which is heat: so we apply warmth to the surface, especially over the cardiac region, and at the same time give brandy and other internally. A still more important indication is to cause contraction of the great veins in the abdominal and thoracic cavities, so that the blood, instead of stagnating uselessly in them, may be sent onward to the heart. Painful impressions on the sensory nerves will often have this effect,—strong mustard plasters, thrashing the feet and legs with switches, etc. Digitalis, as possessing the power of contracting the vessels and strengthening the pulsations of the heart, is of great value, and should be

given freely. In syncope the first idea is to restore the circulation to the brain; and this we do by laying the head on a level with the body or even somewhat lower. The next thing is to raise the blood-pressure; and, as the condition is due to dilatation of the arterioles of the surface, we pursue a plan of treatment directly opposite to that employed in shock, and dash cold water in the face and chest and hurry the patient from a warm room into the cold air, in order to cause contraction of those vessels. For the same reason we apply ammonia or aromatic vinegar to the nose.

TREATMENT OF ORCHITIS WITH NITRATE OF SILVER (*Pacific Medical and Surgical Journal*, October, 1873).

—Dr. W. E. Whitehead states that his plan of treatment for orchitis has been as follows. Rest in bed, and the application of a thorough coating of a solution of nitrate of silver—forty to eighty grains to the ounce—to the scrotum of the affected side, first having the scrotum well washed in soap and water; the administration of small doses of Epsom salts and tartar emetic dissolved in water, and repeated as often as once in four hours; support to the testicles, and low diet. In some cases it is only necessary to make one, or at most two, applications of the solution of nitrate of silver to the scrotum; but sometimes it becomes necessary to paint once a day for three or four days before the swelling and pain are arrested. When the whole testicle is painful, hot, and swollen, stretch the scrotum over it gently, and then apply the solution with a camel's-hair brush; but when the testicle is not so seriously implicated, merely draw the scrotum lightly over the epididymis portion, and apply the solution in the same way. One application is generally sufficient to relieve the extreme pain and at once arrest the inflammation and distressing sense of tension in the testicle, and the lumbar pain that follows the course of the spermatic cord. When the inflammation runs high, give tartar emetic in nauseating doses, otherwise in much smaller quantities.

POST-MORTEM NOTES ON THREE CASES OF HANGING (*Indian Medical Gazette*, September 1, 1873).—G. G. MacLaren, M.B., had the opportunity of making post-mortem examinations on the bodies of three criminals who had suffered death from hanging. In none was there any emission of semen or feces. In two there was great congestion of the brain, attended in one case with effusion into both lateral ventricles. In the other there was little congestion, but some sub-arachnoid effusion. The lungs were collapsed and anæmic, the heart normal, and the pericardium partially filled with fluid in all three cases. In one there were dislocation between atlas and axis, and rupture of the odontoid ligaments; in another, dislocation and rupture of ligaments between the axis and third cervical vertebra; and, in the third, dislocation between the atlas and the occipital bone.

In two cases reflex movements were noticed for a few minutes after the drop fell, but in the third case not a single movement could be detected.

THE DETECTION OF ORGANIC MATTERS IN THE AIR.—At the Chemical Society of Berlin, Prof. Smee proposed a method for discovering the organic matters contained in the air by means of distillation by cold. A glass funnel, with the tubes stopped, is filled with ice and held suspended in the air. The humidity of the air is condensed upon the outside of the funnel along whose surface it trickles, to drop in a little basin beneath. This liquid is weighed. It contains ammonia, usually, which is separated and its quantity determined by well-known methods. The quantity of organic matter in the air is then approximately estimated by that in the liquid. It is possible in this way also to arrive at the odorous principle in flowers.—*The Druggist*, August, 1873.

A NEW REACTION OF ALCOHOL (*Le Progrès Médical*, August 23, 1873).—The discovery of alcohol in organic liquids is often of great difficulty, owing to the small quantity of liquid which the chemist has at his disposal, and the absence of any distinguishing test. We owe to M. Bertholet an obvious and characteristic reaction.

In the presence of cold or lukewarm water benzoic chloride ($C_{14}H_5ClO_2$) is only decomposed with extreme slowness, but, on adding alcohol to the liquid, benzoic ether is immediately formed, and is thrown down in excess. The presence of this ether becomes apparent if a few drops of the liquor are heated with a solution of caustic potash; the chloride only is decomposed, while the ether remains unaffected. This reaction is very evident with a liquid containing one per cent. of alcohol, and allows us to dispense with distillation.

EVACUATION OF A PORTION OF BOWEL.—The following case occurred in the wards of Dr. Demarquay, at the Hospice Municipal. A boy of fifteen was taken with a violent fit of vomiting, colic, and diarrhoea, after eating some sugar-plums painted in red, green, and blue. The stomach was tense and swollen, and six worms, together with three bits of a fleshy substance, like boiled liver, were thrown up. Twenty other worms were afterwards successively vomited. On the fifteenth day the patient evacuated a piece of thickish, slimy membrane, about an inch broad and twenty inches long, and into which the finger could be introduced like a glove. After this the boy went on lingering, with frequent attacks of diarrhoea, and, though the appetite was good, he gradually lost flesh. The attacks were doubtless occasioned by the fecal mass reaching the retracted portion of the soldered bowel. The patient died, but a post-mortem was not allowed to be performed. *London Lancet*.

MISCELLANY.

WHAT ARE INSTINCTIVE ACTIONS?—This is really, to the thoughtful man who is learned on the subject, a most intensely difficult question. A paper on this subject appears from the pen of Mr. George Henry Lewes, in *Nature*, and is well worthy of perusal. The author states, among other things, that the fact that we require some character to distinguish the instinctive from the impulsive actions may be readily shown. No one calls breathing, secretion, excretion, etc., instincts. Yet these are the actions of congenital tendencies in the organism. "A hungry chick," says Mr. Spalding, "that never tasted food, is able, on seeing a fly or spider for the first time, to bring into action muscles that never were so exercised before, and to perform a series of delicately adjusted movements that end in the capture of the insect." Every one would pronounce this a typical case of instinct. Now compare with it the following, which no one would class among the instincts: A newborn animal that has never breathed before is able, on first feeling the stimulus of the atmosphere, to bring into action a very complicated group of muscles which were never so exercised before, and to perform a series of delicately adjusted movements which end in the aeration and circulation of the blood. This contrast may lead us to the character sought. Understanding that every line of demarcation in psychical phenomena must be more or less arbitrary, and only justified by its con-

venience, we may draw such a line between impulse and instinct. Impulses are the actions which from the first were fatal, inevitable, being simply the direct reflex of the stimulated organs. Given the respiratory organs and the atmosphere, respiration is the inevitable result. Given the secretory organ and the plasma, secretion is the inevitable result. There is no choice: the action either takes place, or it does not.—*The Lens*.

DESTRUCTION OF LIFE IN INDIA.—The numbers of people destroyed by wild beasts constitute an extraordinary feature of Indian life. The loss of life is very great in some districts, and in others it is less only because goats are abundant, and the wolves prefer kids when they can get them. No fewer than 14,529 persons lost their lives by snake-bites in 1869, and in 1871 there were 18,078 deaths reported as caused by dangerous animals of all classes; but Dr. Fayrer is of opinion that systematic returns would show that there are more than 20,000 deaths annually from snake-bites. The inhabitants of the border-lands between jungle and cultivation are killed and eaten by tigers in such numbers as to require the serious attention of the government. In Lower Bengal alone 13,401 human beings were killed by wild beasts in six years, and 40 in South Canara in the single month of July, 1867. The chief commissioner of the Central Provinces has to report 946 persons killed by tigers in three years ending with 1869. There are difficulties in the way of extirpating tigers: the natives regard the man-eating tiger as a kind of incarnate and spiteful divinity, whom it is dangerous to offend, and it is the desire of a few in India actually to preserve tigers for sport. Mr. Frank Buckland has suggested an organized destruction of the tiger-cubs in the breeding-season, and the attraction of full-grown tigers to traps by means of valerian, of which these animals, like cats, are exceedingly fond.—*British Medical Journal*.

CINCHONA IN INDIA.—A parliamentary paper on the progress of India in 1872 gives information respecting the cultivation of the cinchona-plant, which was introduced into the hill districts in 1860. The total expenditure of the experiment was £61,719. There are now 2,639,285 plants in the government plantations on the Neilgherry Hills alone, without counting those of private planters in this and other districts. The largest trees are 30½ feet high, and over three feet in girth round the trunk. The area covered by the plantations amounts to 950 acres, and is being largely added to every year. The bark under cultivation is stated to be much richer in quinine and other alkaloids than the wild bark of South America. During last year 7295 pounds of excellent bark were sold in the London market, while 65,688 pounds were supplied to the local manufactory. This year 20,000 pounds will be sent home. The alkaloid is manufactured on the spot in an exceedingly cheap form for the use of local medical stores, and hundreds of fever-patients are thus annually cured. The object of providing an abundant supply of the febrifuge at a price within the means of the popula-

tion at large is rapidly being realized.—*British Medical Journal*.

NÉLATON.—The *London Lancet* says, "Authors have not sufficiently insisted on the peculiar timidity and shyness which characterized his general demeanor, so much so that those who might have feared him as a competitor relied on this retiring disposition, and apprehended no rivalry, especially as he was known to have considerable property. But his success with Garibaldi and the favor of the Emperor worked wonders. It is a pity that the circumstance which gained him the Imperial Court drove a colleague of his into an asylum for the insane. Jobert (de Lamballe) had for some time secured the confidence of the Emperor, when the Empress and her suite met with a carriage-accident in Switzerland. The telegram sent to Paris said, 'Let Jobert start at once, or, in his absence, Nélaton.' Unfortunately for the former, he was out of town, and Nélaton went down to Switzerland. His services and his manner won the Empress; poor Jobert was supplanted, and he took the change to heart in such a manner that his mind became unhinged. Nélaton from that period rose with wonderful rapidity. He attended some time afterwards the Czar's son at Nice, his honorarium on that occasion amounting to £16,000."

A DANGEROUS OFFENDER IN CUSTODY.—A man named J. Ryan was arrested in New York, September 27, by Deputy Marshal Crowley, charged with sending obscene literature through the mails. He waived an examination and gave bail in \$5000 to await the action of the grand jury. Ryan has been known by the following aliases: Clinton Medical and Surgical Institute, Dr. John Harvey, Dr. Bell, and Prof. Draper, all of No. 147 East Fifteenth Street; Lucille Demarre, and Lucille Demarre & Co., and Edgar Tremaine, of Station D; Martin Dutton & Co., Nos. 704, 708, 735, 767, and 776 Broadway, and also various numbers in Nassau Street; Marcus L. Bryan, No. 64 Cedar Street; J. Bryan, M.D., of No. 84 Cedar Street; Dr. J. Bryan, No. 96 East Thirteenth Street; Clinton Medical and Surgical Institute, No. 249 South Tenth Street, Philadelphia, and a place in Baltimore. The great sawdust and swindling firm named W. T. Mason & Co., of No. 182 Fulton Street, is also run by Ryan. It is expected that the case will go before the grand jury at an early date.—*Medical and Surgical Reporter*.

FRESH MEAT FROM AUSTRALIA.—The Melbourne correspondent of the *Times* writes that Mr. T. S. Mort, aided by Mr. Nicolle, of the ice-works, has succeeded, after years of unremitting labor and costly experimenting, in discovering a cheap and safe means of applying cold to all perishable articles of food, and is now making great preparations for freezing meat for shipment, and keeping it frozen during the voyage to England. The cattle are to be slaughtered and the carcasses frozen at Bowenfells, on the other side of the Blue Mountains, about a hundred miles from Sydney. By railway they will be conveyed in trucks adapted to the traffic to the depot in Sydney. The depot, which

is a building within a building for the sake of isolating the interior or cold chamber, is capable of holding one thousand tons of frozen meat, and is to contain machinery calculated to produce cold equivalent to sixty tons of ice every twenty-four hours. The agent employed in the production of cold on land is ammonia, and Messrs. Nicolle and Mort have erected extensive works in connection with the gas-works for its manufacture.—*British Medical Journal*.

VEHICLE FOR THE ADMINISTRATION OF CHLOROFORM.—A French medical journal remarks that the best course is to dissolve the chloroform in glycerin (1:3), which is effected with tolerable facility, and gives a very clear solution, pleasant to the taste, and with a strong odor of chloroform. This solution can be mixed in all proportions with water, without the occurrence of any precipitation, though the odor is distinctly perceptible. In forming the mixture, it is well to add the chloroform slowly and to mingle the two thoroughly. It should be left at rest for twenty-four hours; at the expiration of this period a portion of the chloroform will be found to have collected at the bottom of the vase; this should be separated and mixed with an additional part of glycerin, when no further separation will occur. This mixture may be kept for some time without any loss of chloroform by evaporation.—*Boston Journal of Chemistry*.

MUTTON or beef suet can be thoroughly purified by the process of M. Auguste Bermond, of Nice, as follows:

Take twenty-five pounds of perfectly fresh suet, and cut into small pieces, and pound it well in a mortar; after it is well crushed, wash it with cold water repeatedly, so long as the washings are not clear. Then melt over a slow fire, and add about one ounce powdered alum, and two ounces common salt, and let them come to a boil for a few seconds; then strain through a fine cloth into a deep pan, and let it stand for about two hours to allow the impurities to settle; which separate, and put the clean grease into the pan, and add to it one quart rose-water and one and a half ounces of powdered gum benzoin; then heat it gently and remove the scum as long as any arises. Finally, put into a pan and let cool, when the purified suet may be taken off the sedimentary water.

Thus purified, it will keep for an indefinite period without change or turning rancid.—*The Druggist*.

JOHN AUBREY, who was at Harvey's funeral and "helped to carry him into the vault," writes, "I have heard him [Harvey] say, that after his book of the Circulation of the Blood came out, he fell mightily in his practice, and 'twas believed by the vulgar that he was crack-brained; and all the physicians were against his opinion and enoied him. All his profession would allow him to be an excellent anatomist, but I never heard of any that admired his therapeutique way. I knew several practitioners in this town [London] that would not have given 3*d*. for one of his bills [prescriptions], and that a man could hardly tell by one of his bills what he did aime at."

THE BLIND IN PRUSSIA.—From official inquiries, it appears that in the year 1871 there were in the Prussian dominions 22,143 blind persons, or 89 blind persons in each 100,000 of the population. The highest numbers were in the provinces of Posen and Prussia, where there were respectively 107 and 106 blind per 100,000; the lowest number, 7, was found in Hohenzollern. These remarkable differences appear not to depend alone on the geographical position of the several provinces; for Pomerania shows a smaller proportion than any of the southern provinces except Hohenzollern. The number of blind in proportion to the population has greatly increased in the last ten years: in 1859 there was one blind person in 1649 of the population, while in 1871 there was one in 1111. In the sixteen institutions for the blind in Prussia there were only 549 pupils.—*British Medical Journal*.

ELECTRIC LIGHT.—A company in Paris are now making an improved electrical machine for producing the electric light. It is provided with four plates, and when made to revolve three hundred and fifty times per minute affords a light equal to two hundred and thirty or three hundred gas-burners. A steam-engine of two and a half horse-power serves to run the machine, which costs the nice little sum of 8000 francs (\$1600 gold). This is not so very expensive, when we remember that a few pounds of charcoal will produce as brilliant an effect as could be had from twenty pounds of rape-seed oil. The light is well adapted to light-houses, ships, and large halls; and why not for lighting city streets? A few of these scattered about the city would greatly relieve the dangers attendant upon a gas strike.—*Journal of Applied Chemistry*.

LYING-IN-HOSPITAL AT JERUSALEM.—This hospital, established by the Baroness B. de Rothschild, is doing excellent work. Dr. Loudon, the director of the institution, lately issued a report, from which we find that 120 females were received at the hospital during the past year; 48 of these were born in Jerusalem, 24 were Russian born, and 19 came from various parts of Turkey. Each inmate on leaving receives a donation of ten francs, and clothing for herself and child. The early period at which marriage is celebrated in Palestine is shown by the fact that two of the mothers were only fifteen years of age; three had reached sixteen years; five, seventeen years; nine, eighteen years; four, nineteen years; and fifteen had reached their twentieth year.—*Lancet*.

PRESENCE OF ALCOHOL IN THE HUMAN URINE.—After having shown that urine on putrefying produces alcohol, M. Béchamp has sought to discover alcohol in the urine of persons who have previously been subjected to a régime of abstinence from wine and alcoholic drinks. In the urine collected in these conditions, and in which fermentation had been prevented by the addition of a little creosote, M. Béchamp has found enough alcohol to be able to set it on fire. In one of the experiments there was enough alcohol in two litres of urine to be determined by the alcoholometer. The

author believes that the liver produces alcohol physiologically.—*New York Med. Record*. (This is confirmatory of the researches of our countryman Dr. Ford, who years ago obtained alcohol from the blood of animals which had lived lives of strict teetotalism.—ED. P. M. T.)

IN a rather scarce book, called "Mems., Maxims, and Memoirs, by William Wadd, Esq., F.L.S., Surgeon Extraordinary to the King. London, 1827," I find, on page 21, the following note or memorandum:

"Mr. Paul, a surgeon at Stroud, in Gloucestershire, lately extracted from the kidneys of a woman, by an incision through her back, a rough stone as large as a pigeon's egg, and made an entire cure: it is the first of the kind ever performed in this kingdom."—*New York Med. Rec.*, from *Gentleman's Magazine* for Aug. 1733.

AN EXPERIMENT WITH SAFRANIN.—Safranin is now often employed to impart to silk a rose-red color. If a few particles of the pure dye are placed in a porcelain dish, and one or two drops of concentrated sulphuric acid allowed to fall upon it, and stirred with a glass rod, a most beautiful blue color is produced. On adding a drop or two of water it changes to a brilliant emerald-green. By alternately adding a drop of acid or of water, nearly all the colors of the rainbow may be produced.—*Journal of Applied Chemistry*.

THE entries at the German universities for the year 1873-4 are 7467; 3904 being for the winter, and 3563 for the summer session. The number of medical students is 2479. The total number is 851 less than the previous year, when it was 8318, there being a falling off of 444 in the medical entries alone.

DR. STELLWAG VON CARION, the eminent ophthalmologist, has been appointed to the additional professorship of Clinical Ophthalmic Surgery, instituted in the University of Vienna.

OFFICIAL LIST

OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U.S. ARMY, FROM OCTOBER 28, 1873, TO NOVEMBER 10, 1873, INCLUSIVE.

MCPARLIN, T. A., SURGEON.—Assigned to duty at Fort Leavenworth, Kansas, as Post-Surgeon. S. O. 169, Department of the Missouri, October 31, 1873.

GHISELIN, JAMES T., SURGEON.—So much of S. O. 206, October 15, 1873, as relates to Surgeon Ghiselin, is revoked. S. O. 217, War Department, A. G. O., November 3, 1873.

MCCLELLAN, ELY, ASSISTANT-SURGEON.—Relieved from duty at Headquarters Department of the South, and to return to his proper station, Lebanon, Kentucky. S. O. 189, Department of the South, October 31, 1873.

WOLVERTON, W. D., ASSISTANT-SURGEON.—Leave of absence extended thirty days. S. O. 219, War Department, A. G. O., November 5, 1873.

KNICKERBOCKER, B., ASSISTANT-SURGEON.—Assigned to duty at Camp Harney, Oregon. S. O. 146, Department of the Columbia, October 17, 1873.

WATERS, W. E., ASSISTANT-SURGEON.—Relieved from duty at Fort Leavenworth, Kansas, and assigned to duty at Fort Riley, Kansas, as Post-Surgeon. S. O. 169, Department of the Missouri, October 31, 1873.

KIMBALL, J. P., ASSISTANT-SURGEON.—Leave of absence extended thirty days. S. O. 99, Headquarters Military Division of the Missouri, November 5, 1873.

SATURDAY, NOVEMBER 22, 1873.

ORIGINAL COMMUNICATIONS.

CASE OF EXTRA-UTERINE PREGNANCY —A FŒTUS OF TEN WEEKS EXPELLED PER RECTUM—RECOVERY.

BY H. E. WOODBURY, M.D.

*Read before the Medical Society of the Alumni of Georgetown College,
November 3, 1873.*

EXTRA-UTERINE foetation is of rare occurrence, and this fact gives to the cases met with in practice a peculiar interest. Of all the phenomena incident to generation, no one, it strikes us, is more anomalous or remarkable than this. We can readily conceive how, after impregnation, the ovum may be arrested in its journey towards the womb, its natural receptacle; but why it should become attached to other structures, and from unnatural sources derive nourishment and support, even to full maturity,—as happens in some cases,—this we confess puzzles us. It would be far more reasonable to suppose that, failing to reach the womb, development of the germ would be arrested, decomposition follow, and the blighted product in time find its exit through a natural channel,—the Fallopian tube,—or, failing in this, be removed by absorption. Such, experience teaches us, is not the case; and the greater the pity it were not.

Mrs. J., aged 30, has been married eleven years. A few months after her marriage she had a miscarriage. From that time up to March 13, 1873, menstruation was regular. She had never been pregnant. In April her catamenia did not appear, and she suffered from great pain in the left side, nausea, and general malaise. These symptoms were more marked when her next period returned in May. In June, as she was going downstairs, she was suddenly seized with cramps and bearing-down pains. To use her own expression, "I felt as if everything in me was going to be forced out." She was at once placed in bed, and the nearest physician summoned. He prescribed an anodyne, and left. In a few days she was up again. Soon after, she noticed that some shred-like substances passed from the vagina, and sent for her physician. He prescribed for her, told her she would soon be better, left, and did not see her again.

July 10, 1873, her husband desired me to see her, as she was getting worse. I called, and she informed me that the physician who had been treating her had abandoned the case, and she must have relief, if possible.

Her condition at this date (July 10) was as follows: Pulse 90; tongue heavily coated; bowels alternately constipated and relaxed; extremities cold; fever, insomnia, anorexia, nausea,—all characterized her case. She complained of much pain and soreness in the left lumbar region, and at times there seemed to be an unusual prominence in that part. So great was the tenderness, when this prominence was most marked, that she could not bear the slightest pressure of the hand upon it. From this point as a centre, the pain extended to her back, her breast, her limbs,—in short, over her whole body. Her complexion was sallow, and, at times, almost jaundiced. Her decubitus was dorsal; she could not lie on her left side at all.

My first consideration was, What have I to treat here? Is it a miscarriage, ovaritis, peritonitis, cancer, or extra-uterine pregnancy? My second was,

How shall I determine? I directed that if anything passed from the vagina it should be placed in alcohol provided for the purpose. I ordered turpentine stupes to the abdomen and breast, an air cushion to relieve the back and prevent bedsores, and, as she had lost much sleep, and her stomach was very irritable, I administered, hypodermically, one-fourth grain of morphia at night. Beef-tea, milk punch, and wine were freely given. Lime-water, solution of carbolic acid, and champagne gave her only temporary relief from the vomiting.

As there was a slight discharge from the vagina, I determined as soon as possible to make an examination with the speculum. I began to suspect malignant disease of the uterus. The extreme sensitiveness of the parts had first to be overcome. Tepid enemata of flax-seed tea, with laudanum, soon removed this. The examination did not confirm my suspicions. The cervix was a little larger than normal, and very sensitive, admitting the sound for three-fourths of an inch. Made no effort to pass the instrument into the cavity, and detected no signs of cancer.

July 20.—I determined to try liquor of ergot, as a digital examination convinced me that the womb was about twice as large as it would be in an unimpregnated condition, and I concluded that, if it contained a dead foetus, the sooner it was removed the better. Shortly after its administration she passed from the vagina, at three different times, masses of a shred-like substance, which were at once placed in alcohol. Dr. J. J. Woodward, of the U.S.A. Medical Museum, and his assistant, Dr. E. M. Schaeffer (both of whom manifested much interest in the case), carefully examined these under the microscope. They could detect no indications of malignant disease of the uterus, nor evidence that the substance was the product of an abortion.

A careful examination of the abdomen convinced me that this was not a case of peritonitis, for the painful part was too circumscribed, and there was some tolerance of pressure with the finger over the right iliac region, while the other side was exceedingly sensitive and painful.

In order to relieve the pain, if possible, and to ascertain whether its origin was ovarian, I ordered the following, which has proved of value in such cases:

R Ammonia mur., ʒj;
Tinct. aconiti, fʒj;
Syr. aurant., fʒiv.

M. et sig. Dose, one teaspoonful three times a day.

No favorable results followed its administration.

Thus, it will be seen, I arrived at a point—from a series of negative confirmations, viz., it was not a miscarriage, not carcinoma, not peritonitis, not ovaritis—where I could fix my diagnosis.

At this stage of the case (about the 26th of July) I announced to the patient and her husband my diagnosis of the case,—extra-uterine pregnancy. From August 4 to August 8 her symptoms were greatly aggravated. The persistent efforts to vomit (although her stomach was entirely empty) seemed to rack her entire system, and I began to fear that she would sink from the exhaustion induced by them. Remedies were of no avail. On the 7th of August she seemed very bilious, having had no evacuation for two days. Five grains of mass. hydr. administered, and the dose repeated in five hours. Citrate of magnesia was ordered on the morning of the 8th. Soon after some blood-clots passed from the rectum, and one arm of a foetus. Saturday morning, August 9, while having an evacuation, she felt something engaged in the anus that she was unable to pass. It was removed by her nurse, and proved to be the larger portion of a foetus, with the placenta and cord attached. One hand with the arm was perfect. It was a foetus of about ten weeks,

and, although somewhat decomposed, is carefully preserved, as an interesting specimen, in the U.S.A. Medical Museum.

The following is a history of the case from the date of the expulsion of the fœtus, August 9, 1873.

I was sent for as soon as the fœtus passed, but did not see my patient (as I was detained by other engagements) until 1 P.M. She had been suffering from faintness and nausea, and had passed several blood-clots per anum. In reply to my question, "How do you feel now?" she said, "I feel a constant desire to pass fecal matter, and this is accompanied with pain in the left side, and nausea." I at once made an examination per vaginam. The os and cervix were in a normal condition. There was no indication of dilatation. The os was no more patulous than on my previous examination. When I removed my finger there was no trace of blood upon it. I then passed the forefinger into the rectum. The operation was attended with great pain to the patient. The temperature of the part was greatly increased, and on withdrawing the finger it was found covered with blood, and what seemed to partake of the character of pus. I at once placed a folded napkin against the vulva, and directed that it be examined after more clots passed. This proved that the clots came from the anus, as the napkin was unsoiled. Pulse weak, and 100. Some fever, with thirst, and occasional chilliness. Ordered beef-essence and brandy, alternate hours; turpentine stupes to the abdomen, and enemata of solution of starch, turpentine, and laudanum three times a day; hot bricks to the feet; no solid food; hypodermic injection at night; gave ice freely; vin. ferri et cibi, fʒss three times a day.

August 10.—Patient restless and feverish. Slept some last night. Pulse 118; surface moist (cold perspiration); skin sallow; great thirst, and pain in the left side, passing thence to other parts, as the back and breast. Treatment continued.

August 11.—Has passed some blood per anum since yesterday. Pulse 120; extremities inclined to be cold; complexion sallow; expression bad; complains of thirst, debility, and a constant desire to defecate. Abdomen is smaller, and less tender. Slept without hypodermic injection, awaking about every two hours. Treatment continued, substituting beef-essence for solution of starch in the enemata.

August 12.—Had a bad night until one-third of a grain of morphia was injected hypodermically. Pulse 118; complexion and expression bad. Pain seems to have moved higher up the left side. She suffered much from nausea until the morphine was administered, after which her stomach became quiet. The morphine quieted her, but she did not sleep. Temperature, morning, 99½°; noon, 100°; night, 101°. Treatment unchanged.

August 13.—Bowels moved slightly last night. Pulse 110; temperature, 6 A.M., 99°; 12 M., 99½°; 6 P.M., 99°. Complains of pain higher up. Stomach very irritable. Had a restless night,—somewhat delirious. Gave less brandy; otherwise, treatment continued.

August 14.—Tongue red and dry; great thirst; pulse 102; pain has moderated, but there is great tenderness over the pit of the stomach. Circulation bad, as evidenced by coldness of hands and feet; at times flighty, desiring to get out of bed; temperature, 7½ A.M., 97°; 12 M., 98½°; 6 P.M., 101°; did not rest well last night.

R Ol. terebinth., fʒjss;
Pulv. acac.,
Pulv. sacch. alb., āā ʒij;
Tinct. opii,
Spt. lavand. co., āā fʒj;
Aq. puræ usque ad ʒij.

Ft. emulsio.

Sig.—One teaspoonful every three hours.

August 15.—Bowels moved last night. Pulse 108; tongue moist, and symptoms better; no pain, but great debility; expression is decidedly better, and she seems more cheerful; temperature, 6 A.M., 98½°; 12 M., 99°; 6 P.M., 100½°.

August 16.—Had a good night. Pulse 102; bowels moved three times during the night; the last time she passed some debris of the fœtus that had been retained when the mass came away; complains of pain in the pit of the stomach, and cannot retain the emulsion; tongue not so moist as yesterday; circulation not so good; it is with difficulty that her hands and feet are kept warm; temperature, 6 A.M., 98°; 12 M., 98°; 6 P.M., 98½°. Suspend the emulsion, continue the other treatment.

August 17.—Rested well last night, and seems to be better. Pulse 102; no fever; very little pain and thirst; desires more substantial diet, as she "feels hungry;" bowels moved last night; circulation evidently improved; temperature, 6 A.M., 99°; 12 M., 99°; 6 P.M., 100½°. Treatment continued.

August 18.—Doing well. No pain, save when she coughs; had a slight night-sweat last night; pulse 96; temperature, 6 A.M., 98½°; 12 M., 99½°; 6 P.M., 100°; took some cracker in her chicken-broth last night, and feels that she is becoming stronger. No change in treatment.

August 19.—She is very comfortable to-day; seems quite free from fever; no pain in the side, but tenderness on pressure over the uterus; was raised up in bed for a few minutes, while her pillows were adjusted. Pulse 102; temperature, 6 A.M., 98½°; 12 M., 99°; 6 P.M., 100½°. Takes the vin. ferri et cibi three times a day, broth, soup, or beef-tea, with brandy.

August 20.—Complained to-day of some pain in the left side; relieved by a turpentine stupe; not so much tenderness over the uterus; had a small evacuation, perfectly natural, no pain; has some fever at night, and requires the morphine; pulse 102; temperature, 6 A.M., 98°; 12 M., 99°; 6 P.M., 101°. Took a soft-boiled egg this morning, as her appetite is improving.

August 21.—Up to this date have made my visit in the morning, only calling at night when I deemed it necessary. Deferred my visit to-day until 8 P.M. Has been very comfortable all day, but had a restless night until the morphine was given. Pulse 108; tongue moist; extremities cool and moist; appetite improving; temperature, 6 A.M., 98°; 12 M., 98°; 6 P.M., 99½°.

August 22.—Saw her at 7½ P.M.; has some fever; pulse 108; some pain in left side; temperature, 6 A.M., 98°; 12 M., 97½°; 6 P.M., 99½°.

August 23.—No pain in the abdomen; had a severe headache last night, and did not sleep, although the hypodermic injection was given; took a little raw beef to-day; pulse 96; temperature, 6 A.M., 98°; 12 M., 98°; 6 P.M., 99½°; tongue moist, and symptoms generally favorable.

August 24.—Had severe pain in the abdomen last night, and two evacuations, caused probably by eating a few grapes; has some fever to-day; has vomited what seemed both sour and bitter to her; has been suffering from ardor urinæ; decoction of uva ursi, with flaxseed tea, ordered; pulse 96; temperature, 6 A.M., 96½°; 12 M., 98°; 6 P.M., 100°.

August 25.—Was restless last night until the injection of morphine was given; has felt (as she expresses it) a drawing sensation in the left iliac region, similar to that attending the application of cups; pulse 90; temperature, 6 A.M., 98°; 12 M., 98°; 6 P.M., 100°.

August 26.—Complains of a tightness or drawing in the left side of the abdomen (lumbar region), but no pain; suffered some from nausea last night; had an evacuation, and it contained much mucus; ardor urinæ relieved; pulse 90; temperature, 6 A.M., 98½°; 12 M., 98°; 6 P.M., 100°.

August 27.—Does not rest at night unless she has the morphine; has pain in her back, probably from remaining too long in one position; gentle pressure upon the abdomen causes no pain; every attempt to straighten the left leg causes a sensation of drawing or tightness in the left side of the abdomen; pulse 96; temperature, 6 A.M., 98°; 12 M., 98°; 6 P.M., 99°.

August 28.—Had some fever last night, and vomited bile; complained of sharp pain in left lumbar region, extending into the groin and to the right side of the back; appetite is failing; extremities rather cool and moist; stimulants ordered to be taken in larger doses; she has taken but little of them during the last week; mass. hydr., gr. iij, to be given this P.M.; pulse 88; temperature, 6 A.M., 97°; 12 M., 96½°; 6 P.M., 99½°.

August 29.—Was very restless last night until gr. ¼ morphia was injected; to-day pulse is 80, skin cool and moist; has felt some pain in the womb, and passed wind per vaginam; temperature, 6 A.M., 97°; 12 M., 98°; 6 P.M., 100½°; had an evacuation, passed bile, and feels very comfortable.

August 30.—Had slight fever last night, and some nausea, which the injection of morphia relieved; has some pain in the left lumbar space to-day, but can extend the left limb with less difficulty, and with but little or none of that drawing in the left side; pulse 96; temperature, 6 A.M., 98°; 12 M., 98°; 6 P.M., 98½°.

August 31.—Felt some "cutting pains" in left side last night; had a yellowish discharge from the vagina, accompanied with a throbbing pain in the womb; pulse 80; temperature, 6 A.M., 98°; 12 M., 98½°; 6 P.M., 99½°.

September 1.—Sat up in a chair ten minutes to-day; has no pain when quiet, but is very weak; pulse 78; temperature, 6 A.M., 97½°; 12 M., 98°; 6 P.M., 98½°.

September 2.—Did not feel so well to-day, and had quite a fever at night; pulse 80; temperature, 6 A.M., 97½°; 12 M., 98°; 6 P.M., 98½°.

September 3.—Feels much better to-day, and is doing well.

At this stage of the case, on account of a misunderstanding with the husband relative to the *quid pro quo*, my ministrations ceased, the patient passing to the care of Dr. Lincoln, of this city.

The notes of this case were taken with care at the bedside of the patient, and no pains spared to make the history both correct and complete. After the expulsion of the foetus every symptom or change of any moment was duly noted, for the purpose of procuring an exact history of the phenomena incident to extra-uterine foetation. Full reports of such cases are rare. In Dr. Garland's case, a brief report of which was copied in a late issue of *The Philadelphia Medical Times* from the *Boston Medical and Surgical Journal*, "the last piece of bone was discharged on May 4." He then remarks as follows:

"Under the most sustaining treatment, the patient gradually sank, and died on the 20th of May, 1872."

An exact history of the case during these sixteen days—the stage of the pulse, temperature, nature and frequency of the evacuations, and general condition of the patient—would be of real interest.

Fortunately, in my case no opportunity was afforded for an autopsy; but a careful study of the case has led me to the following conclusions:

It is my impression that conception occurred just after the menstrual period, March 13, 1873; that the symptoms attending the return of her period four weeks later were in a great measure due to the fact that the pregnancy was abnormal, and as

the foetus increased in size it caused pain by pressure upon the parts with which it was in contact. I strongly suspect that the grave symptoms upon the return of her third period in June were induced by the passage of the foetus with the placenta into the colon, as adhesion, softening, and consequent breaking down of the tissues of the large intestine must have taken place, otherwise the foetus would have remained in the abdominal cavity.

Now, admitting conception to have taken place about the middle of March, 1873, and arrest of development to have occurred early in June, we should find, as in this case, a foetus of about ten weeks.

As regards the temperature in this case, at no time, it will be seen, did this exceed 101°, while on the 24th and 28th of August it fell to 96¾° and 96½°. Dr. Aitken ("Science and Practice of Medicine," vol. i. p. 48) says, "When it is found in a bad case of typhoid fever that some morning about the third week the temperature has fallen to 99.5°, the reparative stage has begun, the healing of Peyer's patches."

We ask, therefore, did not the low temperature on the 24th of August mark a favorable crisis in this case, so far as the condition of the intestine was concerned? We had expected (after the passage of the foetus) to find the temperature ranging with that of typhoid (enteric) fever. In this we were mistaken. Why did the temperature never exceed 101°, and why should it fall so low as 96½°? Excessive loss of blood will cause a decline in temperature. That condition did not obtain in the present case, for the small amount of blood lost after the expulsion of the foetus led me to believe that my patient might recover. Had there been profuse hemorrhage I should have anticipated an unfavorable result.

Another interesting question presents itself as regards this case. Where did impregnation take place? In the ovary, I believe, and before the ovule left the Graafian vesicle. Why? Because when it occurs in the Fallopian tube and the ovule fails to pass into the womb, rupture of the tube is generally attended with fatal hemorrhage (Ramsbotham, p. 575). I consider this a case of sub-peritoneo-pelvic pregnancy, the second in Cazeaux's classification, "in which the ovule, after having quitted the ovarian vesicle, is unable to pass into the Fallopian tube, but gets between the two laminae of the broad ligament, and is there developed. Of course the ovule is situated without the peritoneum, and it lodges principally in the pelvic cavity." The same author adds (p. 261), "In this variety the product of conception, by occupying the pelvic excavation, displaces and compresses the organs there situated,—the vagina and rectum, for instance,—and pushes them to one side." This condition would have obtained in our case, but for the early arrest of development, as evidenced by the extreme sensitiveness of the vagina, and the marked prominence in the lower portion of the left lumbar region just above and to the inside of the sigmoid flexure.

Taking it for granted that this prominence or swelling marked the position of the foetus and pla-

centa, we infer that they must have entered the descending colon at a point just above the sigmoid flexure. The capacity of the bowel in this quarter strongly favors such a supposition.

Ramsbotham (p. 583) informs us that he had known of fourteen cases of extra-uterine foetation, with the following results. Ten died, four recovered. Two passed the bones per anum; from one the foetus was extracted by incision; the other recovered, the foetus remaining within her.

October 31, 1873.—In a conversation with Dr. Lincoln to-day, he informed me that he made but a few visits before he found Mrs. J. down-stairs and able to walk about. Since that he had not seen her. "You had got her through all right, doctor, and there was nothing for me to do," he remarked.

I believe that the morphine administered hypodermically, while it often failed to produce sleep, quieted the nervous irritability,—a great point to be gained,—and proved very valuable in this case. While in some instances I have seen excessive vomiting follow its administration by this method, a contrary effect obtained here. The nausea was greatly relieved by it. To the careful use of morphine hypodermically, to the prompt meeting of indications as they appeared, to a faithful adherence to the sustaining treatment, and to the determination of my patient not to die, I attribute her recovery from a condition that generally proves speedy and surely fatal.

WASHINGTON, D.C., November 3, 1873.

SOME OF THE CAUSES OF HÆMOPTYSIS.

BY HORACE Y. EVANS, M.D.

THERE is scarcely an event occurring in the general practice of medicine, except it be post-partum flooding, that so shocks and, to an extent, paralyzes the physician, as copious hæmoptysis.

Notwithstanding the conviction of the experienced that this hemorrhage rarely proceeds so far as to produce immediate death, yet, remembering that the blood is life, and to see that life, as it were, gushing from both mouth and nostrils, and that, too, from a being already chlorotic from a wasting disease in a vital organ, is sufficient to disturb the equanimity of the most deliberate.

This loss of blood may arise from various causes, and at various periods of health and disease.

The causes may be conveniently, and to a certain extent truly, divided into two classes,—those external to the body, and those internal, or arising as a result of a diseased condition. Of the first, we have mechanical injuries to the chest, such as penetrating wounds. During the late war of the rebellion this was not an uncommon event in the experience of many of us. So also from fracture of the ribs, spiculæ of bone penetrating the lung-tissue, the inhalation of caustic fumes and particles of irritating dust, as in the case of file-makers or those employed in grinding and polishing metals. It frequently results from excessive physical exertion, as in straining, or lifting heavy bodies. The forced retention of air in the lungs whilst the ab-

dominal and thoracic muscles are rigidly contracting will, in many cases, produce either an emphysematous condition or a complete laceration of the viscus with its contained plexuses of arteries and veins.

Of the second class, catarrh may be named as occasionally causing hemorrhage; though the uncomplicated attacks usually traceable to this cause are of so slight a character that we are forced to the conclusion that the bleeding is from the vessels on the larger bronchial surfaces, and not from the lungs proper.

Another very fruitful cause of this hemorrhage, and one frequently not recognized, is disease of the left side of the heart. The defective mitral valve, with its indurated, contracted, and weakened segments, no longer protects the delicate lung-structures against the powerful contractions of the left ventricle, and, as a consequence, regurgitation takes place, thus keeping up a constant and forced dilatation of the pulmonary vessels. These sooner or later give way, producing the most annoying and obstinate attacks of hæmoptysis with which we meet. Indeed, there is no more unfortunate complication with which the consumptive can be afflicted than this same disease of the heart.

We have also what are called vicarious hemorrhages,—those following the interruption of habitual discharges, such as hemorrhoidal or menstrual. They are occasionally serious, yet by that remarkable law of accommodation in nature the vessels soon become reconciled to the excess of blood, and it flows on submissively in the natural channels. Notwithstanding the facility with which we can thus rationally account for almost every form of hæmoptysis, we usually associate its occurrence with an internal and far more grave disorder than any of which we have as yet spoken,—viz., the incipency or full-fledged existence of consumption.

Authorities differ widely in regard to the relationship existing between this hemorrhage and the presence of tubercles in the lungs. Launce, Louis, Rokitansky, Watson, Williams, and many of our own writers, associate the two as almost invariably dependent the one upon the other. Either the hemorrhage, by its subsequent clots, creates a local irritation, congestion, and inflammation, thus clogging the channels of nutrition, the lymphatic glands degenerate and are converted into tubercles, or the whole mass becomes cretaceous phthisis; or, on the other hand, fully-developed and softening tubercles by the ulcerative process open a pulmonary vessel and thus act as a direct cause of hemorrhage. Though there may be valid reasons for rejecting hæmoptysis as pathognomonic of consumption in the early stage, yet in the latter it becomes a direct result, pointing to softening and actual destruction of lung-substance. There are, undoubtedly, numerous instances in which hemorrhage has been frequent and copious without terminating in disease; yet it is a well-established pathological fact that in cases of tubercular cachexia there exists a fragile state of the blood-vessels not usually found in other diseases. This degenerating tendency, so characteristic of consumption, greatly

favors, and is the only way of accounting for, this bleeding in the early stage, when the physical signs do not as yet indicate disease. We have often watched, and with a degree of certainty predicted, hemorrhage in the early stages of phthisis. The history and symptoms of such a case would be about as follows. An irritating, short, and dry cough, traceable to a slight cold contracted a few days previously; great oppression, difficulty in breathing, loss of appetite, thirst, continued fever; pulse rarely under 100; temperature from 100° to 104°; expectoration very slight, and of a saltish taste. Percussion-signs at first almost nil. Auscultation would reveal dry tubular sounds over a part of one or both lungs. Respiration rapid, with *prolonged* expiration. These symptoms would gradually become aggravated, continuing for several days, when, after an unusually severe attack of coughing, hemorrhage would commence. The relief following this occurrence sustains our explanation,—viz., the existence in the first place of tubercular deposits to an extent not as yet recognizable by physical signs nor incompatible with the normal functions of the lungs. But the catarrh awakens the fire; the flames spread rapidly to the miliary centres already existing, and, upon the principle of *ubi irritatio ibi affluxus*, an active congestion results, and the degenerated and enfeebled blood-vessels, unable to endure the pressure, give way.

The main cause, however, in the advanced stage, and the one resulting in the most copious loss of blood, is the dilatation and thinning of the pulmonary blood-vessels. By some authors it has been named ectasis, or aneurism; but to the sight and touch in the cadaver it resembles the varicose condition often found in the veins of the lower extremities. In the process of softening and conversion of the tubercular or adenoid substance into pus, cavities are formed, through or on the walls of which the pulmonary vessels pass; by the loss of structure they are exposed, the normal support of the lung-tissue is removed, and the vessels dilate and eventually burst.

This event may occur in the formation or emptying of each successive abscess. The progress of the disease to a fatal termination depends upon the rapidity with which one abscess follows another.

NOTES OF HOSPITAL PRACTICE.

JEFFERSON MEDICAL COLLEGE.

CLINIC OF PROF. S. D. GROSS, M.D.

Reported by JOHN B. ROBERTS.

TUBERCULOSIS OF THE SPINE.

THIS little child has angular curvature of the spine from caries of the bodies of the vertebræ, as is shown by this projection in the middle of the dorsal region. This affection, frequently called Pott's disease, is dependent upon deposits of tubercular matter in the arcular structure of the vertebral bodies, and is in its nature essentially like the tuberculosis of the hip and

other joints that is found so frequently in children of the strumous diathesis.

After deposition has occurred, softening and disintegration take place, utterly destroying the bodies of the vertebræ, so that the weight of the head and shoulders causes the spinal column to bend forward, and the spinous processes, which are not affected by the disease, to project unnaturally and make a protuberance upon the back. The amount of deformity produced is governed by the number of vertebræ involved, and when several of these are destroyed the contour of the chest is very materially changed, the ribs and sternum being forced to assume a horizontal position.

The pus formed may be discharged in the neighborhood of the disease, or, by travelling downward, form a lumbar or psoas abscess.

The affection occurs in children of a strumous diathesis, and usually before the age of ten; though cases are occasionally seen where the patient has attained adult years.

The child first becomes weak and delicate, has cold extremities and a tumid belly, and is awakened during the night by spasmodic pains in the chest and abdomen resembling neuralgia. Pain upon pressure is then noticed, and difficulty in progression occurs, as shown by the peculiar gait assumed by the little patient, who walks with the body inclined forward, the head bent backward, and the feet widely separated and scarcely raised from the floor, to avoid concussions of the spine.

As the disease advances, paralysis of the extremities may supervene from compression of the spinal cord, caused by the angularity of the column at the seat of morbid action; and, as the pressure is first brought to bear upon the anterior portion of the cord, the function of motion is generally impaired before sensation.

The treatment of caries of the spine consists essentially in absolute rest in the recumbent posture, so that the vertebral column may be relieved from sustaining the head and shoulders, which tend to increase the deformity as long as the diseased bones are compelled to support them. As soon, therefore, as the affection is recognized, the child should be confined in bed, upon a firm level mattress, without any, or at most with a very low, pillow, and should be kept there until repair takes place. This is accomplished by the formation of osseous material around the seat of disease, bridging, as it were, the gap left by the destruction of the bodies of the vertebræ, and affording support to the head and shoulders. In this position the patient must remain, not a few weeks or months, but until the cure is completed by the occurrence of firm ankylosis.

As the disease is a manifestation of constitutional vice, such internal remedies as will build up the system must be employed: hence cod-liver oil, quinine, and the ferruginous preparations should be administered, and the child given the benefit of the best possible hygienic surroundings.

GOITRE.

Mary S., aged 14, and born in this country, comes to the clinic with a swelling in the neck, for which she requests treatment. This is simply a case of goitre, or chronic hypertrophy of the thyroid gland, which is rather an unusual affection among natives of this country, though often met with in certain sections of Europe, where, indeed, in some places, as in the valleys of Switzerland, it is endemic, and frequently associated with that peculiar form of idiocy known as cretinism.

Goitre, or bronchocele, which, by the way, is not confined to the human subject, but has been observed also in the inferior animals, occurs chiefly in young persons, females more frequently than males, and may occasionally be hereditary. The skin over the swelling is free from discoloration, and there is usually no pain

connected with the progress of the disease unless a nerve be compressed by the morbid growth. The tumor generally increases slowly, but may in time attain great bulk, causing headache and epistaxis by obstructing the return of venous blood, and difficulty in respiration by the pressure exerted on the trachea and upon the phrenic and pneumogastric nerves.

There are numerous growths occurring in this situation which might make a diagnosis difficult, were it not that each has characteristics that in most instances render its nature apparent. Swelling of the lymphatic glands may be excluded when there are none enlarged in other portions of the neck, and when there is no history of strumous disease.

Aneurism, particularly of the carotid artery, might be confounded with goitre, but it is not liable to occur at such an early age, shows pulsation, has its peculiar whirr, and, moreover, is immovable. Cases, however, in which the bronchocele is large and developed laterally may readily be mistaken for aneurism, since the tumor, overlying the carotid artery, will transmit its pulsation; but the slowness of the growth, the absence of the aneurismal whirr, and the ease with which the tumor can be moved away from the cervical vessels will serve to distinguish the affections.

The most characteristic feature of goitre is its ascent and descent with the trachea during the act of deglutition. Hence, by also presenting this peculiarity, cystic tumors situated over the thyroid gland resemble goitre perhaps more than any other affection; but these are generally of small size, and can be recognized, if other means fail, by the use of the exploring-needle.

When the disease is in its early stages and no organic change of structure has taken place, much can be effected by treatment, and even the entire disappearance of the tumor may sometimes be attained.

The administration, internally, of the preparations of iodine, the corrosive chloride of mercury, or the muriate of ammonia is found to be attended with very beneficial results; while sorbefacient lotions and unguents, such as tincture of iodine and ointment of the red iodide of mercury, are employed externally to excite the action of the absorbents. The detraction of blood by leeches placed over the swelling will also be productive of a great deal of good in many cases.

This girl shall rub thoroughly into the skin over the goitre a small amount of the ointment of the red iodide of mercury diluted with seven parts of simple cerate, and internally she shall take seven drops of Lugol's solution of iodine.

BELLEVUE HOSPITAL, NEW YORK.

Reported by W. H. FARRINGTON, M.D.

MALIGNANT DISEASE OF THE TESTICLE.

D. M., æt. 17 months, American, admitted November 1, 1873. Family history good. At birth the right testicle was noticed to be enlarged to about the size of an English walnut, and hard. For the first week after birth the testicle was drawn up tightly against the external ring; then it descended into the scrotum lower than the other. During the first year of life the testicle remained in about the same condition, not enlarging predominantly over the left, the integument preserving its normal appearance. The child was carried to a medical college for examination, and an exploring-needle introduced. What the exploration revealed is unknown; but one week later three incisions were made into the tumor, quite profuse hemorrhage following the operation. For a day or two the tumor decreased in size, then began to enlarge, no pain appearing to accompany its growth. The integument

assumed a brownish discoloration. The child's health did not suffer in the least.

On admission, the general appearance is that of health; appetite good; bowels regular; child is bright and cheerful. The right testicle is enlarged to the size of a goose-egg; the spermatic cord is elongated, and the scrotum distended, reaching to within an inch of the knee. Considerable dusky discoloration exists in the scrotum, especially on the right side; but no ulceration is detected.

November 1, 1.30 P.M.—Patient anæsthetized and an exploratory incision made by Prof. J. R. Wood, revealing malignant disease of the medullary type. Enucleation of the organ was then performed, with trifling loss of blood. Patient rallied well from the operation, and was apparently comfortable until November 2, 2 A.M., when he became restless and seemed to be suffering from pain. At 6 A.M. he suddenly developed clonic convulsions. The dressings were removed, the child was placed in a hot-water bath, and a few drops of spirits of camphor were given, with little or no effect in arresting the convulsive movements. Chloroform was administered, and the convulsions ceased immediately, but returned in an hour, when they were again arrested by chloroform. Ordered sodium bromide, gr. ij every hour.

9 A.M.—Patient has muscular twitchings, confined mainly to the right side. Surface hot and dry; pulse rapid and weak. Ordered brandy, ℥v every half-hour.

12 M.—The muscular spasms are now limited to the flexors of the right forearm. Pupils slightly dilated; some oscillation of the eyeballs. Pulse has more force and less frequency; surface cooler. Brandy discontinued. Sodium bromide, gr. ij every two hours, ordered. Patient refuses to nurse.

4 P.M.—Surface hot; pulse frequent and feeble; respiration rapid, and jerking muscular movements confined to right forearm. Brandy renewed as before.

November 3, 9 A.M.—Child slept none through the night. Has convulsive movements of right arm and face. Respirations rapid and laborious. Pulse rapid and feeble; skin hot and dry. Sponging of surface with tepid water ordered, and brandy, ℥v every half-hour.

12.30 P.M.—Patient moribund. Has muscular spasm in both arms and face.

2 P.M.—Died.

Autopsy not allowed by parents.

SUBACUTE PLEURISY—ASPIRATION—DEATH FROM SYNCOPÉ.

S. D., æt. 21, single, England, admitted June 7, 1873. Was admitted on the above date suffering from subacute pleurisy on the right side. On August 1 she was appointed night nurse, though still suffering from cough, dyspnoea, and pain in the right side, with physical evidences of fluid persisting in moderate quantity.

October 2.—Patient is compelled to relinquish her night service, and is readmitted as a patient. Pulse 132; respiration 48. Physical examination reveals dulness over the left lung, with absence of vocal fremitus over both sides. Respiration short and sharp on both sides, with a bronchial character, especially on the left side at the base, where it is distinctly bronchial. On right side respiration quite good to the base of the lung. Heart is pushed about two inches to the right of the sternum; the apex about the same distance to the left.

October 3.—Exploration with hypodermic syringe made, and clear serum obtained. Pulse 136; respiration 56; temperature 103½°. Patient has great dyspnoea, rendering speech almost impossible. Pulse feeble. Aspiration employed, only 3ij of serum being obtained.

6 P.M.—Patient still suffering as before. Ordered stimulants, and tincture digitalis 3j.

9.30.—Pulse stronger, and patient feels better. Aspi-

ration again employed, and four pints of fluid withdrawn slowly, without any feeling of discomfort to the patient. Respiration better; pulse gaining in strength.

11 P.M.—Patient resting quietly in bed.

11.15 P.M.—During the temporary absence of attendants, patient rose from her bed to the floor, and immediately fainted. Surface cold; face blanched; pulse feeble. Cold affusions to head employed, and hypodermic injection of whisky given, the pulse gaining temporary strength, but sinking again almost immediately. In a few seconds the patient died.

Autopsy.—Both lungs adherent to the pleuræ, which are thickened and contain a few miliary tubercles. In each cavity a few ounces of serum found, containing gelatinous lymph. Lower lobe of left lung compressed; lower lobe of right lung congested and œdematous. Point of aspiratory puncture appears only as a small spot of ecchymosis. Other organs healthy, with exception of bladder, which presents signs of inflammation.

ST. MARY'S HOSPITAL—DISPENSARY FOR NERVOUS DISEASES.

SERVICE OF CHARLES K. MILLS, M.D.

Reported by JOHN S. BAGG, M.D., Resident Physician.

HEMIPLEGIA.

A. M., æt. 36, married, had severe attacks of rheumatism at the ages of sixteen, twenty, and twenty-six; suffered also from slight rheumatic pains at irregular intervals up to the time of coming to the hospital. Six months before presenting herself for treatment, when several months pregnant, she was seized with vertigo while sweeping, at the same time experiencing intense pain in the back of the head. She lay down, but after a short time was able to go to her supper, and, while eating, her jaws became stiff, and she fell back paralyzed.

She was carried to bed, and remained there helpless, —three weeks later giving premature birth to a child, which lived but two days. She was confined to her bed six weeks in all, after which she could manage to hobble about. In the interval before applying to the hospital, four months and a half later, she stated that her condition varied, being better and worse by turns, but there was no decided improvement. During this time she was under no regular treatment.

On coming to the clinic she had marked hemiplegic facial paralysis of the left side. Her tongue was "thick," and protruded with difficulty. There was no ptosis, but slight convergent strabismus. She could not masticate on the affected side, and she had some trouble in swallowing. Her left arm hung lifelessly. She could not elevate it at all, except by inclining her body towards the right. The forearm was slightly flexed, but could not be moved by the patient. The fingers were tightly clenched, and could not be opened except by prying. The deltoid was slightly atrophied, as were also the muscles of the posterior scapular region. The left leg was dragged in walking, the left foot describing an arc as it was with great effort lifted. The toes were flexed. On examination, a blowing heart-murmur was discovered.

Owing to the still existing rheumatic tendency, iodide of potassium, in ten-grain doses, was given three times daily. Kneading of the muscles, and stimulating liniments, were ordered. One-twentieth of a grain of strychnia was given daily, and the left side was faradized twice weekly. This treatment was continued about a month, the patient slightly improving, when hypodermic injections of sulphate of strychnia were resorted to, with most decided benefit. After twelve injections of one-thirty-second of a grain had been

given hypodermically, the patient had almost regained the entire use of her paralyzed side, being able to open her fingers, elevate her arm, walk with very slight limp, etc. The hypodermic injections and faradization will still be continued.

TRANSLATIONS.

NITRITE OF AMYL.

HAVING his attention particularly directed to the nitrite of amyl by its effect in a case of angina pectoris, to which it gave immediate relief, Dr. Amezdroz (*Archives de Physiologie* for September, 1873) was led to study the literature of this subject, and to endeavor to ascertain by experiment the physiological action and therapeutic value of the drug. The article is briefly as follows:

When the vapor of nitrite of amyl is inhaled by man, it produces redness of the face, marked pulsation of the carotid and temporal arteries, occasional palpitation of the heart, sometimes a sensation of vertigo with headache, and an acceleration of the pulse. The cough excited in some cases by its inhalation is evidently due to the irritating effect of the vapor on the bronchial mucous membrane. Although no dangerous toxic results in man have yet been reported, because the feeling of distress and sickness which supervenes almost immediately upon the commencement of the experiment prevents a continuance of the inhalation, such results undoubtedly may be produced, because we know that it causes death in the lower animals. In these the first effect is great restlessness; the animal sneezes, and struggles to get away; the respiration becomes quickened and fuller, and occasionally stops. These respiratory troubles cannot be considered as a specific symptom of the intoxication by nitrite of amyl; they are more probably due to direct irritation of the bronchial passages: besides, the injection of any liquid whatever into a vein generally produces a sense of oppression, and acceleration of the respiratory movements. The action of the heart becomes equally increased, and the thoracic wall is visibly moved by its strong pulsations. Following this are alternating tonic and clonic contractions in the extremities, and even in the face; then opisthotonos, shivering, involuntary exertions, vomiting, and coma. Post-mortem results are not very marked, except the dark color of the blood, and the dilated, engorged heart; death being produced, apparently, by paralysis of this organ.

The method adopted for the administration of the nitrite of amyl is of great importance. The means by which the toxic effect is produced most quickly is by injection into a vein; the symptoms show themselves immediately, and rapidly pass off. It is surprising to note the amount of urine passed by the animal immediately after such an injection, although the bladder may seem to have been completely emptied but a few moments before; this occurs with each injection. It would have been of interest had a chemical analysis of this urine been made; but this was, unfortunately, omitted. By inhalation death can be produced by a comparatively smaller amount; though the symptoms are not so marked, and the inhalation must be continued for some time in order to produce external manifestations. By hypodermic injection the substance reaches the blood so slowly that it produces but little effect, the elimination taking place so rapidly that there is not at any time a sufficient quantity in the organism to produce the characteristic symptoms. As for the digestive tube, it seems to possess no decided advantages, but to be on about the same footing as the subcutaneous in-

jection. The administration by inhalation being more energetic, and at the same time watched with facility, it is natural that physicians should have unanimously preferred this to its internal exhibition, which has been abandoned. Following the administration of the nitrite of amyl, there is a marked decrease in the intervacular pressure, as shown by the manometer in all the experiments. There is also a constant dilatation of the capillaries, or, more properly, the fine arterial ramifications, which was not seen in the fine venules, and was but partially found in the capillary net-work proper.

This dilatation is evident soon after the inhalation is commenced, increases sometimes to double the calibre of the vessel, and, after a certain time (fifteen to twenty minutes), diminishes again, whether the inhalation is continued or not. This contraction continues until the vessel is smaller than before the inhalation. If the experiment is repeated, the phenomena are reproduced, but more rapidly. There is also a constant slowing of the capillary circulation, which follows the dilatation, and may be due to the lessening of the pressure. During the muscular spasms of the animal, the dilated vessels become momentarily smaller, and the circulation more rapid; but when the animal becomes quiet the effect of the nitrite of amyl is re-established.

The lowering of the blood-pressure and the capillary dilatation could only be produced simultaneously by an intervention of the vaso-motor nervous system, central or peripheral, or by automatic change in the walls of the vessels. A weakening of the heart's action cannot be considered as the cause, for that alone would not produce capillary dilatation: this must therefore precede the lowering of the tension, which would be the natural consequence of such dilatation.

A toxic effect upon the vaso-motor centres in the medulla would naturally appear to be the explanation of these phenomena, because direct or reflex irritation of that ganglion produces a diminution of the tonicity of the walls of the vessels. The nitrite of amyl is able to act in two ways upon the vaso-motor nervous centre: either by being brought by the blood directly in contact with that important organ, or by reflex action from irritation of the peripheral nerves. The limited extent of this nervous centre, and the small amount of blood conveyed to it, exclude the first hypothesis, while it is easily seen that by irritation of the peripheral ramifications of the pneumogastric, or some other nerve, the nitrite of amyl may produce a reflex irritation of the vaso-motor centres, and hence a diminution of the tonicity of the vascular walls. Two alternatives remain: either that the peripheral extremities of the vaso-motor nerves are affected, or the intimate muscular fibre of the vessels; but, as this leads us to the vexed question of muscular irritability, which we prefer not to discuss, we will merely state the fact that under the influence of nitrite of amyl constant dilatation of the pupil does not occur, which demolishes the theory of Brunton, who argued that from this dilatation we might infer a similar action in all the unstriated muscular fibres. Let it be the one or the other, the blood is really the irritating medium; and, rather than admit a direct action of the nitrite of amyl, which is not probable, we are disposed to take into consideration its chemical effect.

We know that it acts energetically in preventing the oxidation of bodies, and particularly that of the blood, also interfering with the elimination of its carbonic acid. This is corroborated by the post-mortem appearance of the heart and the arteries, which are filled with very dark blood. In conformity with the theories now generally admitted, this blood charged with carbonic acid, by strongly irritating the peripheral vaso-motor nervous filaments or the muscular fibres themselves, might rapidly induce a condition of paralysis

leading to dilatation. In company with certain distinguished physiologists, we adopt the theory that there are two species of muscular fibres in the walls of the vessels. The nitrite of amyl produces an irritation of those fibres which preside over dilatation, while those that govern contraction are unaffected by it.

The acceleration of the heart's action depends upon the capillary dilatation. In those cases where it is very marked, as after a large injection into a vein, it is possible that the ganglia which give to the heart its automatic motion are also affected by it; and, if it be pushed too far, death may supervene from paralysis of the heart.

The therapeutic employment of the nitrite of amyl is based upon these facts, and is particularly indicated where there is probable spasmodic contraction of the capillaries. If it has not always answered to the expectations of those who have used it, it is because it has often been improperly employed. Resting on a physiological basis so clearly defined, the new remedy holds an elevated position at the side of digitalis; and we hope that new experiments will soon be made to determine under what circumstances the physician may employ it with success, so as to contribute towards obtaining for it the right of introduction into the *Materia Medica*.

FRANK WOODBURY, M.D.

THE TEMPERATURE OF THE BODY AS AN AID IN THE DIAGNOSIS OF SOME FORMS OF SYPHILITIC DISEASE.

By DR. BÄUMBEER (*Deutsches Archiv für Klin. Med.*).

THESE observations were made upon patients suffering from the three following forms of syphilis: 1. Pustular syphiloids of the eruptive stage. 2. Rheumatoid forms of syphilis. 3. Ulcerative syphilis. The first case observed was that of a man with intermittent fever of a quotidian type, who three months previously had had an indurated sore, and at the time of observation had a pustular eruption, which later became ulcerative. Every evening for ten days the patient took five grains of quinine; but, as no effect was produced, the inunction treatment with mercurial ointment was ordered. After the tenth inunction a remission of the febrile symptoms was noticed, but eight days later the fever and the syphilitic pains returned.

The rheumatic forms of syphilis were observed in numerous patients, and under various conditions: in some cases, as swelling of the joints and acute or chronic periosteal trouble; in others, again, as affections of the fibrous tissues around the joints and bones; and in a third class of cases simulating very closely acute articular rheumatism. Some of the cases with periosteal affections presented a great similarity to chronic phthisis in the well-marked remissions they manifested. Dr. Bäumbeer convinced himself of the syphilitic origin of the disease by the result of treatment with iodide of potassium. A woman aged 29, with infiltration of the apices of both lungs, and enlargement of the spleen, suffered from ulcerative syphilis, and presented a well-marked variation in her morning and evening temperature. The use of quinine had no effect in lowering the temperature of this patient, but the use of the iodide of potash effected this at once, although there was a fresh outbreak of the ulcerative process in the pharynx, and upon the calf of the leg and on other portions of the body. Dr. Bäumbeer thinks that this form of remittent fever takes its start from the masses of exudation, and that a pyrogenic matter is formed in them which is peculiarly susceptible to the action of iodide of potash, while in other forms of remittent fever this drug is without influence.

WM. ASHBRIDGE, M.D.

PHILADELPHIA MEDICAL TIMES.

A WEEKLY JOURNAL OF

MEDICAL AND SURGICAL SCIENCE.

The Philadelphia Medical Times is an independent journal, devoted to no ends or interests whatever but those common to all who cultivate the science of medicine. Its columns are open to all those who wish to express their views on any subject coming within its legitimate sphere.

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EDITORIAL.

PROFESSIONAL ADVERTISEMENT.

IN our last editorial with the above caption, for divers causes which it is not necessary to recapitulate, we objected to the newspaper cards of the Pennsylvania Hospital. We did not, however, give the most cogent reason for the abandonment of their publication,—namely, the fact that if one hospital is allowed to advertise in such manner, all hospitals must have the same privilege—for whilst the practice is sufficiently unbecoming and unjust in the case of a general hospital, it is much worse in that of a special hospital. The reason of our selecting the Pennsylvania Hospital as the point of attack was because personalities—*i.e.*, reflections on individuals—could in this way be best avoided, since the custom originated before any of the present staff were even students of medicine, and because in connection with *this* hospital originated that practice which, at first harmless, has grown into an evil, and has been mother of worse evils.

One of the great dangers of specialism is its tendency to run into quackery,—a tendency so marked that it would be very hard to draw the line between some noted specialists and the quack. The specialist of course assumes the position that he is superior in his own line to his colleague the general practitioner. Granting that he is so, it becomes him to take his place most modestly. As, however, his bread and butter are to be obtained not only through the general practitioner, but also through the recognition by the laity of his superiority and

their consequent spontaneous consultation of him, the temptation is immense for the specialist to constantly exalt or parade his knowledge on every fair opportunity, and, as he gradually grows less and less sensitive, to adopt more and more doubtful expedients for making himself known and appreciated among the general populace.

The larger the population of any centre, as already asserted, the greater the importance to the individual of advertisement. So in London the specialist thrusts himself forward far more boldly and persistently than with us. A recent English writer uses the following language, which, we are happy to be able to say, is not as yet in any case applicable to the Philadelphia specialist:

"It is not only the herbalist and the bone-setter, but, with shame be it said, it is nowadays the well-educated specialist who sings with quite as lusty a voice as they,—

" 'See here, see here, a doctor rare,
Who travels much at home;
Come take his pills,—they cure all ills,
Past, present, and to come.' "

Although, as just stated, we are in this matter far behind our transatlantic brethren, yet we have started upon the road, and, at the rate we are travelling, will soon overtake them, especially since the Council of the London College have put the brakes down pretty sharply.

The great objection we make, then, to the practice of our oldest hospital is that it has opened the gate very wide and made a smooth pathway for the specialist to travel. Day after day there appear in our public press advertisements of the Wills, Orthopædic, St. Mary's, and probably other hospitals, offering treatment of diseases of the nervous system, or diseases of this or that organ or set of organs, by Doctor this and that, residence so and so. Now, we want to know in what respect these cards differ in effect, if they do in spirit, from private cards. Why would it serve the purpose of Dr. Sly, dermatologist, any better to insert his private card in the newspaper than to have the managers of some hospital put it there for him and endorse him before the people with all the weight of their private and public influence?—saying, practically, Dr. Sly is a most eminent physician,—a specialist of such unrivalled ability and acknowledged eminence that we have secured his services for our institution.

If some unknown or young and uninfluential physician should modestly take perhaps the only way he has of making himself known, and simply put "oculist," or "aurist," or "dermatologist" upon his door-plate or window-shutter, he would be at least tabooed, if not actively proscribed, by the Philadelphia profession; and yet we see day after day the names

of men who are leaders among us appearing in the public press clothed only in the flimsy veil of a hospital card. We denounce the forbidding of the one and the allowing of the other, as a gross injustice,—an injustice which ought not to be tolerated by any right-minded body of men for an instant. We do not blame the physicians who are advertised; we censure no man for taking advantage of every chance to forward his own interests; and so long as the custom exists, and is allowed by the medical authorities, no blame is to be attached to any individual for allowing himself to float down with the current. To find fault with any one for not being a reformer is simply childish.

See, however, what the practice will lead us to in the near future, and what it has already led to in the present.

As is well known, both the Jefferson Medical College and the University of Pennsylvania have organized dispensary services with full corps of specialists. The University Hospital is *un fait accompli*, and that of the Jefferson no doubt will be soon: as a matter of course, if not to-day, some time in the next few years the specialists connected with these hospitals will be dignified with the titles of professors. Both the institutions named—be it said to their honor—have abstained from advertising their staffs. But if the present course be persisted in, sooner or later the incumbents of clinical chairs will use their positions for their own personal advantage. When the custom is sanctioned by the general consent of the profession, they would be false to themselves if they did not do it.

As is well known, the patients who come to the school hospitals are largely from out of town. If it be right to advertise in one secular paper, it is right to advertise in all. If motives of policy excuse our city institutions for advertising in the city, the same reasons would apply far more strongly to these institutions advertising in the country.

Suppose, then, a prominent card were placed in every newspaper in our own and the adjoining States by the institutions mentioned,—“Dr. —, Professor of Diseases of —; Residence, —:” with the prestige of the schools it would make the fortunes of all concerned. Your orthopædic and other special hospitals would appear, at least on paper, but as rush-lights. Think of it!—a displayed advertisement, magnificent wood-cut of buildings, long array of names, a concentration of force before the community; but that is what we are drifting to, unless some strong hands seize the helm and guide us elsewhere.

Perhaps the strongest objection that can be made

against public advertisements by hospitals of their staffs is to be found in the general looseness of sentiment on the subject engendered by a sense of the injustice of the procedure, and by the feeling, “If Dr. Sly can be advertised in that way with impunity and profit, I can do it in some other way.” Let us see what this has already led to.

We remember how, many years ago, in early boyhood, we gazed with awe-stricken eyes upon pictorial quackery,—the frightful ulcers, the distorted limbs, the alpine tumors, the ghastly faces, and the sweet, peaceful, nay, ecstatic countenances after the electric salve or the magic powder had worked its miracles. So vivid an impression was made upon us by these pictures that to this day we cannot forbear glancing over such sheets whenever they come in our way. For this reason, some weeks since, when an open pamphlet was put into our hands by a friend, we looked with interest at the pictures “before treatment” and “after treatment,” noticing especially the unusually good character of the cuts, and how the crooked had been made straight and the lame to leap like an hart. Judge of our astonishment, O reader! when, on turning to the title-page, we found that in our hands was the “Annual Report” of the Orthopædic Hospital, and that emblazoned on its front were the names and addresses of some of the foremost medical men in the city! Of course none of these gentlemen knew anything about this pamphlet until after it was published. Of course the photographs of their cases were taken, and the wood-cuts made, without their knowledge. With the greatest of pleasure we allow that the medical gentlemen were ignorant of, and consequently are in no sense responsible for, this action of the board of managers. We are confirmed in our judgment by noticing that at least some of the cuts are taken bodily from the catalogue of one of our instrument-makers!

“John Gilpin kissed his loving wife;
O'erjoyed was he to find
That, though on pleasure she was bent,
She had a frugal mind.”

The pamphlet is meant for circulation among the populace. It is arranged to appeal to the ignorant. Does any one suppose that a gentleman who has five or ten thousand dollars to give away will select any individual hospital because its report is studded with the “results of treatment”? No; but the artisan or the laborer whose child is afflicted may, if out of work, take the sufferer to the institution, or, what is more to the point, if the times be good, will consult Dr. — who has wrought the depicted miracles.

In what respect the spirit of this report is more commendable than that of certain institutions usually spoken of as "quack" we should be glad for some correspondent to point out to us. If it be suffered to go to a second edition without an earnest official protest from the medical board, the latter ought to be held in the strictest sense responsible for it. "*Shall not suffer*," says the Code.

Another indication of that growing demoralization whose seed is the practice of the Pennsylvania Hospital is the appearance in our daily papers of well-written and laudatory accounts of surgical operations performed by Doctor this or that.

It may possibly happen sometimes, but it must be very rarely, that the belauded operator really has no suspicion in regard to the publication before it is done. Of course he does not write the account; perhaps he may be able to say with a certain degree of truth that he did not know it was about to be published. In the great majority of cases, however, he could have known, if he had not suffered from a sort of moral or intellectual strabismus.

"Do you see him here now?" said the judge.

"No, I don't, my lord," replied Sam, staring right up into the lantern in the roof of the court.

"If you could have pointed him out, I would have committed him instantly," said the judge."

If a physician have knowledge or suspicion that an operation of his is to be mentioned in the public press, he is bound to prevent the article from being printed. The Code says, "shall not suffer such publications to be made." Of course he can prevent it, if he really try. No editor of a respectable paper would have the paragraph inserted, if he saw that the operator was really in earnest in trying to keep it out and made a personal matter of it. After all, it is a previous violation, in the great majority of cases, of the Code of Ethics, which gets a surgeon into difficulty. The Code forbids "to *invite laymen* to be present" at operations. Reporters do not haunt the medical lecture-room. It may be only a hint to a patient or a friend which starts the ball.

As some of our readers probably have heard, there is a medical society known as the Philadelphia College of Physicians,—a society supposed to comprise the *élite* of the profession,—to be aristocratic. Scientifically, this society is as dead as the equally aristocratic city of Annapolis,* or as the dry bones

in the valley of the prophet. It has been supposed that it is, however, the repository of professional ethics. Is this not so? Is the society to become only an expensively and awkwardly organized "library association"? Where are the censors of it? Why is the representative medical journal of the community forced to show forth our weaknesses to the world, as the only way of stopping the growing evil?

PROCEEDINGS OF SOCIETIES.

PHILADELPHIA COUNTY MEDICAL SOCIETY.

A CONVERSATIONAL meeting was held October 22, 1873, at 8 o'clock P.M.,

DR. W. B. ATKINSON, PRESIDENT, in the chair.

DR. O'HARA remarked that he had been in the habit of relieving frontal neuralgia by a wash of bay rum, vinegar, and water, of each half a pint, together with an ounce of the muriate of ammonia. Recently he had used it in a case of injury to the brain from concussion, for a period of three weeks, when it was found that quite a number of hairs had grown upon the scalp, which had been bald for several years. He had found since that it was quite a valuable hair tonic.

DR. TAYLOR said he had recently vaccinated a child of three and a half months, which after crying a few moments became quite hoarse, the voice having a croupy sound, which was soon reduced to a whisper, and finally was lost. This occurred whenever it cried, or even attempted to "crow," as it would do when pleased. He could perceive nothing unnatural about the fauces. The exterior of the larynx and thorax was perfectly normal, and the child quite fat. The parents had observed this peculiarity of voice since its birth, and thought it was croup; but as the child was perfectly well in every other respect, and a little rest brought its voice back again, they paid little attention to it. The doctor then asked some one to tell the cause.

DR. COHEN, in answer to Dr. TAYLOR, said that the loss of voice under excitement, such as had been just referred to, was caused by temporary paralysis of the muscles of the vocal cords, or because the spasm would not allow them to come together properly.

DR. H. Y. EVANS then read a paper entitled "Some of the Causes of Hæmoptysis" (which appears in the current number of this journal).

DR. COHEN remarked, on the subject of hæmoptysis, that the pathology set forth in the paper seemed to be correct. As regards treatment, he had some experience with ergot given internally and by inhalation. He thought it answered the same local purpose as the iron salts, and, in addition, promoted contraction of the small vessels. He generally used the tincture; but the fluid extract he thought did as well. When spray is used for the lungs, the inhaler should be held at least a foot from the person; when intended for the larynx, it should be held close to the mouth. One drop of iron salt to the ounce is sufficient to produce coagulation. The use of common salt is valuable. Its action, however, is not perfectly understood. His treatment is to keep the patient quiet, in a semi-erect position, and to give tannic or gallic acid, or acetate of lead, with opium. His patients generally carry a pill consisting of one grain of tannin and one-quarter of a grain of opium; sometimes he used the acetate of lead instead of the tannin. He

* Perhaps it may not be known to some of our readers that Annapolis is one of the oldest cities in the Union, and was settled by the *crème de la crème*. Not long since, mansions in good repair were sold for prices which did not equal the cost of the bricks in the garden-walls.

had not used ergotin by hypodermic injection, but thought favorably of it. In a case of scrofulous diathesis, in which epistaxis occurred, he used tannin by injection with an ordinary syringe, and the patient was greatly relieved.

Dr. EVANS remarked that in the copious bleeding of the late stages of phthisis the atomized Monsel's solution is the more prompt in its action, and should be the first employed. But the ergot, by its action upon the arterioles, is more permanent in its effects, and may be continued for several days without any objectionable results.

Dr. SLOCUM remarked that he had found ice useful in connection with other remedies.

Dr. ASH said that he had used the oil of erigeron in ten-drop doses with success. A medical friend, to whom he mentioned it, had also used it with marked benefit.

Dr. BUCK stated that his attention was first called to the use of erigeron by Dr. Samuel Jackson.

Dr. ATKINSON mentioned that the use of iron and ergotin in his own practice was attended with success.

Dr. TAYLOR had some success in arresting hemorrhage from the lungs by the use of five-grain doses of gallic acid every half-hour. Tone was then given to the weak and relaxed vessels, and the cough allayed by the use of sulphate of morphia, with five-drop doses of aromatic sulphuric acid every two or three hours, in the syrup of wild cherry.

Dr. STETLER had found the oil of turpentine most valuable. He thought its power in arresting hemorrhage was due to its general tonic properties.

Dr. McCREAN had used turpentine in hemorrhage from the piles. In the case of a druggist, he had always found it successful in doses varying from ten drops to a drachm.

Dr. BURNS said the subject was one of great importance and highly interesting. Unfortunately, his experience of this disease was more extensive than with many others, inasmuch as both his father and only brother had hemorrhages, extending over a period of twenty years. From this circumstance his medical attention was early called to the subject. When bleeding was in common use, he bled in most of these cases. In many cases of hæmoptysis the hemorrhage is due to a plethoric condition and weakened pulmonary vessels. He has bled while blood was yet flowing from the lung. He used this treatment in his brother's case: for fifteen years he bled him constantly, and always with decided benefit; but for the last five years of his life he was constrained to follow fashion, and did not bleed so much: however, in his case the same necessity did not exist, neither was his death produced by hemorrhage, but by disease of the liver. He only remembers one case in which bleeding was probably wrong, owing to the fact that the patient was in the last stage of phthisis and too weak.

He has bled oftentimes in epistaxis with marked benefit, but has now in a great measure discontinued venesection, relying more on medication, as we have more agents than in former years well adapted to combat such cases.

To arrest hemorrhages he uses sinapisms to the thorax, hot mustard pediluvia to the extremities, with the internal use of extract. secale and tinct. ferri chlorid., drachm doses of ol. terebinthinæ, followed by—R. plumbi acet., gr. ij; acid. tannic., gr. ij; opii, gr. ss; ft. pil. unam; capiat unam pro re nata. Ice and ice-water or iced lemonade for drink, with the chest well elevated.

To meet peculiarities, other means besides these have been used, as digitalis, sulphate of zinc, etc.

Dr. BURNS thought that the spray of various medical agents was worthy of consideration. He had used Monsel's salt of the strength of Ri to Zi , with marked advantage, in a severe case of hæmoptysis, and by injection with a small syringe, in epistaxis, with success.

He said that in the early period of his life, when threatened with pulmonary disease, he was an illustration of the advantage of blood-letting, having had that operation performed numerous times: on one occasion four pounds of blood were removed, under the supervision of the late Dr. Samuel Pickering, a disciple of the Rush school.

By this treatment, Dr. BURNS feels confident that he has been saved thus far from hæmoptysis and phthisis also, and he would not hesitate, under similar circumstances, to repeat it.

Dr. O'HARA remarked that among the remedies mentioned, he would like to call attention to the use of digitalis. In a case of hæmoptysis alternating with menorrhagia, he had always been able to correct the hemorrhage by a pill of digitalis and sulphate of iron.

Hæmoptysis depends upon many causes. If, as he supposes, in many of these cases hemorrhage is due to irregular or excited movements of the heart, then digitalis should act favorably in controlling epistaxis, hæmoptysis, and menorrhagia. Even where hemorrhage occurs independently of organic disease of the heart or any excited condition of the circulation, digitalis is highly beneficial. The late Dr. Brinton, as referred to in Ringer's Therapeutics, esteemed it in hæmoptysis. He states that it reduces the frequency of the pulse, when bleeding ceases. The infusion should be used, and large doses may be needed.

Dr. TAYLOR spoke of the benefit of venesection in hæmoptysis in the case of his uncle, who died at the age of seventy-four years. He had been subject to hemorrhages from the lungs from the age of thirty years, sometimes very severe. They occurred every few years, and he was treated during most of the time by the late Dr. Samuel Tucker, who invariably bled him and then gave small doses of the acetate of lead and opium. The old gentleman was constantly feeling and watching his pulse, and when it rose above the normal condition he would often send for a bleeder before he notified his physician. His cough was controlled by Dr. Samuel Jackson's pectoral mixture. So accustomed was he to these hemorrhages for many years that in his last illness he thought that if he had an attack of hæmoptysis he might recover again.

Dr. WELCH thought there was some danger of falling into the error of attributing too great remedial power to agents used for arresting hæmoptysis, and added that we should not forget that this affection rarely proves immediately fatal, and that the hemorrhage not unfrequently ceases of its own accord.

REVIEWS AND BOOK NOTICES.

AN ESSAY ON THE PRINCIPLES OF MENTAL HYGIENE. By D. A. GORTON, M.D. Philadelphia, J. B. Lipincott & Co., 1873.

The amount of wisdom wasted on the world is very great: in fact, the whole of mankind are like Bunyan's "Slough of Despond,"—ready to swallow up wholesome instruction by the cart-load, and grow rather the worse in so doing. This essay on mental hygiene might be metaphorically likened to a half-peck measure of wholesome instruction. Did we write wholesome? All apples are not ripe, and many of fair exterior cause cramps to the eater: yet are they not all sold by the measure? In some respects this essay is superior to most works of its class. It invades the treasury of general literature, and its flowers and simples are culled from a thousand fields. Its author is skilled in the use of the scissors. He says (page 11, preface), "He who reads the following pages . . . cannot fail to mark

the number of quotations introduced. Had I paraphrased freely, my paragraphs would have looked more original." We are glad he did not paraphrase; else should we have missed many rare sentences of Emerson, Coleridge, Bayard Taylor, Carpenter, Maudsley, Benjamin Rush, Winslow, Lecky, and so on, *ad infinitum*. And all these authors are brought before us to prove that in the matter of "the sublime unfolding of the human brain and mind, proper conditions are the antecedents indispensable to its highest realization in any department of nature or realm of matter or mind."

A certain similarity may be traced in all the works that issue from the press with the avowed aim of reforming the world. Dogmatic, eloquent with tinsel fire, wise with borrowed wisdom, strong in odd statistics, weak in logic and theology, they endeavor to show us how wrong we have all been and are,—except some few people who know better,—till the wonder grows, as we read, how we can go on so and continue to do so still,—how in the face of warning and anathema men will still eat improper food, which injures the mind,—live in hovels, which hinders æsthetic culture,—marry for physical beauty, or position, or money, or for any other reason than love and the highest adaptability and fitness, which causes their children to be vicious and immoral,—when they all know, or may know by reading this book, exactly what to eat, and wear, and live in, and whom they should marry; or, if they have doubts, the author of this book, or the many authors of many similar books, would tell them in a minute. How can men give way to temper, become ferocious, commit murders, when a diet of mush-and-milk would make them mild and gentle? Why will our legislators eat beef-steak, when bread and honey would render them incorruptible?—or our officials indulge in terrapin and oysters, when buttered toast would secure their honesty? And why, if these things are true, are we not all by this time, from President to election-repeater, upon an appropriate and rigidly-enforced system of diet?

The essay on the Principles of Mental Hygiene is wide in its scope. The little matters of diet commented on above are but as pebbles upon the margin of its ocean of facts and fancies. The author is an enemy of tobacco, and quotes Parton and Lizars. The work of the latter writer, however, on that topic, we had always regarded as quite unfit for serious quotation, it being more properly included among the curiosities of literature. Mr. Lizars considered that the use of tobacco produced cowardice; but the late European war certainly did not prove those perpetual smokers, the Germans, deficient in courage; and where smoker meets smoker upon the deadly field, would not such an effect of the weed be advantageous, by producing mutual fear and mutual suspension of hostilities? The author's own observations are rare: "While it must be freely admitted that many good and excellent men smoke, few such, I think, chew the weed;" and again, "The noblest types of manhood and womanhood generally have no affinity for the weed: indeed, I have seldom known a man, and never a woman, greatly distinguished for the high quality of his or her moral perceptions, who was an habitual or even an occasional user of tobacco." We could wish that the author had here indulged in statistics, giving us the number of men and women distinguished as above with whom he is intimately acquainted: a wider range of choice acquaintances might have given him broader views. On the other side he quotes Mr. Bayard Taylor as saying, "Many an impatient thought, many an angry word, have I avoided by a resort to the pipe," and cruelly adds, "But would not a glass of cold water have had a similar effect?" We fear, in the words of Touchstone, "that such a one is a natural philosopher," and, as such, beyond the reach of argument.

The author also has his word to say to the muscular student of the period: "The pugilist who is distinguished for muscle is never famous for brains. The celebrity in letters is notoriously deficient in muscular agility and development," but fails to quote as examples the late Professor Wilson and the Ettrick Shepherd. Also the author is a disciple of Gall and Spurzheim, and discovers by dissection such facts as "inordinate strength and activity of both the passions and intellect, while conscience and the moral brain in general were singularly defective." We were not aware that the presence of conscience could be demonstrated upon the cadaver; its absence and that of the moral brain in the majority of corpses we cheerfully admit.

Again, we find (page 106), "Hahnemann, . . . although a physician, was even more a philosopher, . . . having experimented upon himself in testing the pathogenetic properties of drugs to a greater extent than any previous physician."

The author, after going into the subject of the general demoralization of trade, and the cheating, fraud, and adulteration with which the world is filled, gives this simple and happy solution of the problem: "The true remedy"—he has just been quoting two pages from Henry Ward Beecher on the adulteration of paints, coffee, and liquor—"obviously consists in diversity of mental occupation, and in especially avoiding prolonged mental concentration on single objects and pursuits." Columbus discovered America; but that was trivial. How wonderfully easy, how sublimely simple! Let us give our milkman a copy of the Essay on Mental Hygiene, and advise our too concentrated grocer to visit the theatre,—or some fashionable watering-place, should the season be hot,—to keep him from sanding the sugar.

In Chapter V. the author extols poverty and discourses upon prayer, which latter he considers "a valuable specific to mental hygiene," causing a healthy tone of mind in him who prays, though by no means altering the regular course of things. "These doctrines," he says, "it is objected, are unscriptural: undoubtedly so much the worse is it for Scripture;" after which appropriately follows a chapter on marriage, its abuses and wrongs, equally liberal and free,—freer, indeed, it seems to us, than even the average sentiment of the day. However, like all reformers, he has his remedy. "The primary remedy for these evils, then, is knowledge,—knowledge of ourselves." This is hardly a paraphrase, and not included by him in quotation-marks; and yet the same remark has always been attributed to an ancient Greek, with whose sayings Dr. Gorton is probably unfamiliar. This is so often the way with supposed discoveries and new remedies: they turn out to be old as the hills. Know thyself—not Emerson, or George Eliot, or Maudsley, or James Parton, but thyself—is the unsuspected kernel of the Essay on the Principles of Mental Hygiene. E. W. W.

GLEANINGS FROM OUR EXCHANGES.

THE PREVENTION OF LOSS OF BLOOD IN OPERATIONS. —Considerable interest has been excited among surgeons on the Continent, and also in this country, by the description, by Professor Esmarch, of Kiel, of a proceeding for preventing the loss of blood which often interferes seriously both with the performance and with the success of operations. The proceeding consists in pressing the blood out of the part to be operated on, and preventing its return until the operation is completed.

A clinical lecture of Professor Esmarch lies before

us, in which he gives a graphic description of an operation in which his plan was applied with complete success. The case was one of extensive necrosis of both tibiæ. While the patient was being brought under the influence of chloroform, a bandage of india-rubber webbing was applied tightly round each leg, from the toes to above the knee. Immediately above the bandage, a piece of india-rubber tubing was drawn firmly four or five times round the thigh, and its ends were secured together by hook and chains. This being done, the elastic bandage was removed from the leg, which was found to be quite exsanguine,—in fact, like the leg of a subject on the dissecting-table. The operation for removing the sequester was then performed. So utterly bloodless was it—so entirely free from the oozing which often requires the aid of an assistant to clean the wound before the surgeon can proceed with his operation—that Dr. Esmarch was able to dispense altogether with the aid of an assistant. In fact, his ordinary assistant, Dr. Petersen, was at the same time operating in a similar manner on the other leg of the same patient; Dr. Esmarch having decided that, as he could save the patient's blood, he would also avoid subjecting him to two operations at different times, and thus spare him the tedium of two processes of convalescence. The operation having been completed and the wounds dressed with plugs of amadou and antiseptic applications (Dr. Esmarch being apparently a follower of Prof. Lister's doctrines), the caoutchouc tube was removed, and the blood allowed to re-enter the leg. There was no hemorrhage,—the whole amount of blood lost during the operation being about a teaspoonful from the bone. The subsequent progress of the case was most satisfactory: the healing process proceeded so rapidly that the patient was enabled to leave the hospital, at his own request, on the twenty-first day after the operation.

The plan here described has been employed by Prof. Esmarch in eighty-seven cases of operation, from the beginning of the present year to August 15. Of these, twenty-one were cases of amputation and disarticulation (including six amputations of the thigh, eight of the leg, and one disarticulation of the humerus); eight were cases of excision, thirteen of removal of necrosed bone, five of operation for the removal of tumors. Of the eighty-seven patients, four only died. The amputation-wounds generally healed by the first intention, with scarcely any traumatic fever. In no instance have there been any indications of local disturbance of the circulation as the result of the compression.

The method described by Dr. Esmarch is obviously applicable only, as he states, to operations on the extremities, and on the penis and scrotum; in other regions of the body its application in the manner described is obviously impossible. Yet Dr. Esmarch makes a very ingenious suggestion for its application in operations on the head, neck, or trunk, remarking at the same time that the idea is one the possibility of carrying which into practice requires to be tested by experiment. It is that, as a preliminary to the operation, the elastic tubing should be applied around one or more of the limbs, so as to retain a store of blood in them, which might be allowed to re-enter the circulation from one limb after the other, if the patient showed symptoms of being exhausted by the hemorrhage attending the operation.

One caution he gives, and it is an important one. When infectious material is present in the limb to be operated on, the elastic bandage must not be applied, lest the poisonous matter should be drawn into the general circulation. In such cases, the limb is to be raised so as to empty it of blood as much as possible; and then the compressing ring of elastic tubing is to be applied.

The method described by Esmarch has been tested

and found efficient by Prof. Billroth, of Vienna, Dr. Menzel, of Trieste, and the surgeons of St. Thomas's Hospital in London. Its simplicity, and the successful results which have hitherto attended its application, render it worthy the attention of surgeons. In cases where the surgeon has to operate in circumstances where he cannot obtain efficient assistance, it must be of great value.—*British Medical Journal*.

CROTON-CHLORAL HYDRAT.—The profession and the public are chiefly indebted to Dr. Oscar Liebreich for the introduction of chloral hydrate; and this obligation is further increased by the addition of croton-chloral hydrat, which will doubtless prove an equally valuable therapeutic agent. It is of the greatest service in cases of nerve-pain. Every sufferer from neuralgia is anxious to obtain speedy relief from pain: this may be obtained by taking croton-chloral hydrat, and then the antecedent causes of the neuralgia may afterwards be inquired into and treated accordingly. The following cases are interesting, as showing the immediate relief from pain that this drug affords:

A. suffered from facial neuralgia of a most severe character; it affected her hearing and eyesight. She could not rest or take food. She took one grain of croton-chloral hydrat every hour. In three hours she was considerably better. After taking three more doses, she was entirely free from pain.

B. suffered much from facial neuralgia dependent on decayed teeth, and had not been able to take food or sleep for three days. She was ordered croton-chloral hydrat in grain doses every hour, and obtained great relief after two doses. Six doses removed the pain completely. She slept that night.

C. This patient suffered from concussion of the spine caused by a railway-accident some years ago. She has had every variety of treatment for the pain she suffers in the spine and the nerves proceeding therefrom. She took potassium bromide, gr. xx, and croton-chloral hydrat, gr. i, three times a day, with marked relief and no bad symptoms.

E. This is a young dyspeptic and neuralgic patient, and suffers greatly from dysmenorrhœa. She took two-grain doses when the paroxysms of pain came on, with marked relief.

F. has been under treatment for various neuralgiæ for some years. She has had, at one time or another, almost every external and internal therapeutic agent in the Pharmacopœia,—strychnia, iron, quinine, ammonium chloride, aconite, belladonna, iodine, bromine, blisters, hypodermic injections, galvanism, together with baths and other hygienic appliances, including change of air. In this case, two-grain doses of croton-chloral hydrat every hour afforded more speedy relief from pain than any of the above remedies. After taking eight grains, she was almost free from pain.

In thirteen patients who have taken croton-chloral hydrat, not a single bad symptom has been observed. In grain doses, it relieves pain quickly, causes natural sleep, no subsequent headache or furred tongue. In several cases it acted as a gentle laxative.—*Benson Baker, in British Medical Journal, October 25.*

MEDICAL USES OF CHARCOAL.—A lecture was recently delivered before the Society of Arts, in London, by Mr. W. E. Newton, in which he attributed various virtues to peat and other vegetable charcoal. He stated that in the form of powder, put upon poultices, peat charcoal had been most beneficially employed in some of the London hospitals, especially in cases of offensive sores. It absorbed the putrid effluvia, and was of great benefit in cancers, etc. In many cases, when taken internally, it was productive of good effects in those troubled with disordered stomachs, such as heart-burn, sick headache, palpitation of the heart, and giddiness. In all

diseases of the chest, sore throats, diphtheria, or bronchial affections, peat charcoal has been found very useful. In France, a scientific commission, appointed by government to investigate this subject, has reported very favorably in regard to the usefulness of this substance for a great number of purposes. A minute quantity of peat charcoal, in powder, boiled with some American corn-starch and milk, has been given with marked success in London for dysentery.—*Druggist's Circular*.

INTUSSUSCEPTION IN CHILDREN (*Edinburgh Medical Journal*, September, 1873).—Dr. J. O. Affleck believes the following facts to have been satisfactorily established: 1. That the seat of intussusception in young infants is almost always some portion of the large intestine, usually the neighborhood of the ileo-cæcal valve. 2. That while a cure by the spontaneous reduction and replacement of the invaginated bowel seems occasionally to be effected, yet that that process of spontaneous cure by sloughing of the bowel and subsequent cicatrization, which is sometimes observed in adults and in children beyond one year, appears almost never to take place in young infants. 3. That in them the morbid phenomena following intussusception advance with great rapidity and fatality, and that treatment to be effectual must be prompt and active.

Dr. Affleck details two cases occurring in his own practice, one of which terminated in death, the other in recovery. In the former the initial symptoms were merely slight vomiting and gastric pain, and were not succeeded by urgent symptoms for forty-eight hours, when a discharge of blood and bloody mucus took place from the rectum. Enemata of warm water, inflation, and metallic mercury, were tried unsuccessfully. In the second case all the symptoms came on with great rapidity, and the bloody discharge occurred within a few hours of the commencement of the trouble. Enemata were quickly and forcibly expelled in this case, but inflation was attended with almost immediate success. There was distinct evidence of the sudden yielding of the obstruction, followed by cessation of the symptoms of disturbance, restoration of the normal functions of the bowel, and speedy recovery.

TREATMENT OF GLANDULAR AFFECTIONS (*Edinburgh Medical Journal*, August, 1873).—Dr. F. Page Atkinson, after alluding to the uncertainty which prevails in the treatment of glandular affections, asserts that, according to his own experience, and speaking generally, acute glandular inflammation requires the administration internally of the effervescent citrate of potash, and the application locally of a sedative, or the tincture of iodine.

As regards *quinsy*, he says he can predict with certainty that any patient will be quite well and able to resume his duties on the fourth day, and that he has never had a single case which went on to suppuration, when the following plan of treatment was observed: bicarbonate of potash, 20 grains; compound tincture of guaiacum, 30 minims; compound tragacanth powder, q. s.; in one ounce of water; and 15 grains of citric acid in half an ounce of water. To be taken in a state of effervescence three or four times daily. Twenty-five minims of the tincture of iodine in an ounce of water to be used as a gargle three or four times daily; three or four glasses of port-wine in the twenty-four hours, and as much beef-tea as the patient can take. The throat should be left uncovered, and poultices, steam-inhalations, and the use of purgatives should be particularly avoided.

When suppuration has already commenced, order simply the iodine gargle, the port-wine and beef-tea, and omit all internal medicines.

In inflammation of the breast, he gives a similar

effervescent mixture, containing nitre and ammonia, and applies an ointment consisting of three parts ext. belladonnæ and one of ung. iodinii. In orchitis, he recommends a lotion of fifteen minims of laudanum and fifteen minims of the tincture of belladonna to the ounce of water; and in this disease, as well as in bubo, parotitis, etc., he employs the citrate of potash mixture, with slight variations.

MISCELLANY.

HOW SOON CAN A WOMAN CONCEIVE AFTER PARTURITION?—The editor of *The Clinic* (November 8) endorses the following communication of Dr. W. J. Bertollett:

"At 7.45 o'clock A.M. of December 12, 1869, I delivered Mrs. M. of a full-grown child, female, that lived but a few hours.

"On the 4th day of October, 1870, I was again called in the early part of the night to this same patient in labor, and at 12.30 A.M., in less than one hour after entering the house, delivered her of a full-grown healthy male child, weighing eight and a half pounds, that lived to die of an acute disease one and a half years thereafter.

"In this case the interval was 295 days and 4½ hours, so that, allowing the period of gestation to be 273 to 280 days, it is fair to concede conception to have taken place at from fifteen to twenty-two days after delivery."

Any one who visits Chilwell, England, can read in the cemetery the following epitaph:

"Here lies me and my three daughters,
Brought here by using Seidlitz waters.
If we had stuck to Epsom salts,
We wouldn't have been in these here vaults."

—*Medical and Surgical Reporter*.

INDESTRUCTIBLE PUTTY.—Boil four pounds of brown umber in seven pounds of linseed oil for two hours; stir in two ounces of wax; take from the fire and mix in five and a half pounds of chalk and eleven pounds of white lead, and incorporate thoroughly. The latter operation is quite essential.—*Druggist's Circular*.

A PASTE FROM RICE FLOUR.—Dissolve one hundred and twenty grains of rice flour and twenty grains of gelatin in two ounces of water, heating and stirring continually until it becomes thick and glassy.—*Journal of Applied Chemistry*.

THE CAUSE OF KLEPTOMANIA.—The most ingenious theory ever proffered, perhaps, in explanation of this peculiar diathesis was that lately stated in *New Jersey*: "because the individual had been vaccinated with virus from a hooking cow."—*The Clinic*.

CURE FOR CORNS.—A mixture of equal parts of glycerin and carbolic acid, applied with a camel's-hair pencil, is an excellent remedy for these painful companions.—*Journal of Applied Chemistry*.

WE see by a recent exchange that Dr. Hermann Beigel has just translated Dr. Marion Sims's work on Ovariectomy into the German language.

IN the seventeenth century a law was in force in England that all women, of whatever age, rank, profession, or degree, whether virgins, wives, or widows, that should impose upon, seduce, and betray into matrimony any of his Majesty's male subjects by scents, paints, cosmetics, washes, artificial teeth, false hair, Spanish wool, iron stays, hoops, high-heeled shoes, or bolstered hips, should incur the penalty of the law, and that the marriage should stand null and void. It is said Mr. Gladstone, to increase his popularity, is about to have this law revived.—*Druggist's Circular*.

PERPETUAL PASTE.—Dissolve a teaspoonful of alum in a quart of water. When cold, stir in as much flour as will give it the consistency of thick cream, being particular to beat up all the lumps; stir in as much powdered resin as will lie on a dime, and throw in half a dozen cloves to give it a pleasant odor. Have on the fire a teacup of boiling water; pour the flour mixture into it, stirring well at the time. In a few minutes it will be of the consistency of mush. Pour it into an earthen or china vessel; let it cool; lay a cover on, and put it in a cool place. When needed for use, take out a portion and soften it with warm water. Paste thus made will last twelve months. It is better than gum, as it does not gloss the paper, and can be written on.—*Boston Journal of Chemistry*.

PROF. HYRTL has announced his purpose of resigning his chair in Vienna next spring. As, according to the *Allgem. Wien. Med. Zeitung*, the attendance of students on the Viennese school has declined to the amount of three hundred since the retirement of Skoda and the death of Oppolzer, it seems probable that the faculty will attempt to retain Prof. Hyrtl, one of their most noted members and popular lecturers. Prof. Hyrtl is just now probably in the acme of his powers.

PURGATIVE MIXTURE OF VIENNA.—The *Journal de Pharmacie et de Chimie* gives the following:

Manna,	66 grammes.
Senna,	10 "
Cream of tartar,	4 "
Coriander, raisins, āā	2 "
Water,	320 "

Boil until the water is reduced to 190 grammes. Take before breakfast.

AN instance of the ludicrous results which sometimes follow the use of words not generally known in addressing patients is given by Dr. Filippi in a recent number of *L'Imparziale*. A student, he says, was in his presence one day examining a patient in hospital, and asked him, "Are you addicted to onanism?" (*Ti dai all' onanismo?*) "No, sir," was the reply; "I am a shoemaker."—*The Clinic*.

VANADIUM INK.—One part of pyrogallie acid, three parts of finely pulverized and sifted gum arabic, and three parts of neutral vanadate of ammonia, are triturated in a porcelain mortar with a suitable quantity of cold rain-water. In a short time an excellent ink is formed, that flows freely and has a deep-black color.—*Journal of Applied Chemistry*.

WHITE INK, for writing upon blue paper (like that used for Seidlitz powders), may be made of a solution of potassic carbonate, simple syrup, and mucilage. This ink can be used with a steel pen, and cannot be extinguished, even by dilute sulphuric acid. It can be used on but one side of the paper.—*Journal of Applied Chemistry*.

REMEMBER that a raw egg will clear your throat of fish-bones. Put one in a little hot wine, add some sugar, and the fish-bones will slip down all the easier. P.S.—You can take the egg, wine, and sugar, anyhow. They're good as a preventive; and you don't know what moment you may get a fish-bone in your throat.—*Druggist's Circular*.

BLACK BRANDING-INK.—Triturate together one part of pine soot and two parts of Prussian blue with a little glycerin; then add three parts of gum arabic and sufficient glycerin to form a suitable paste.—*Boston Journal of Chemistry*.

DR. ADDINELL HEWSON, of the Pennsylvania Hospital staff, on his return to active professional life, after a long sojourn in Europe, was the recipient of a complimentary dinner from his colleagues and other prominent members of the profession. The affair passed off most pleasantly.

THE next conversational meeting of the Philadelphia County Medical Society will be held, Wednesday, November 26, at 8 o'clock P.M., at the Hall of the College of Physicians. The regular physicians and students in the city are always welcome.

OFFICIAL LIST

OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U.S. ARMY, FROM NOVEMBER 10, 1873, TO NOVEMBER 17, 1873, INCLUSIVE.

HASSON, A. B., SURGEON.—Granted leave of absence for (20) twenty days, provided he makes satisfactory arrangements to supply medical attendance during his absence. S. O. 59, Headquarters Military Division of the Atlantic, November 12, 1873.

McKEE, J. C., SURGEON.—To report to the Commanding Officer of the Presidio of San Francisco, to relieve Assistant-Surgeon De Witt of his duties at that post. S. O. 130, Headquarters Department of California, October 30, 1873.

WOLVERTON, W. D., ASSISTANT-SURGEON.—To report to the Commanding General Department of the South, for assignment to duty. S. O. 227, War Department, A. G. O., November 14, 1873.

GREENLEAF, CHARLES R., ASSISTANT-SURGEON.—To report to the Commanding General Department of the South, for assignment to duty. S. O. 227, War Department, A. G. O., November 14, 1873.

CALDWELL, D. G., ASSISTANT-SURGEON.—Relieved from duty in Department of the South, and to report in person to the Commanding General Department of Texas, for assignment to duty. S. O. 227, War Department, A. G. O., November 14, 1873.

TAYLOR, M. K., ASSISTANT-SURGEON.—Relieved from duty in Department of the South, and to report in person to the Commanding General Department of Texas, for assignment to duty. S. O. 227, War Department, A. G. O., November 14, 1873.

DE WITT, CALVIN, ASSISTANT-SURGEON.—On being relieved by Surgeon McKee, will comply with Paragraph 9, S. O. 192, c. s., from the Adjutant-General's Office. S. O. 130, Headquarters Department of California, October 30, 1873.

PATZKI, J. H., ASSISTANT-SURGEON.—To report in person to the Commanding General Department of the Platte, for assignment to duty. S. O. 227, War Department, A. G. O., November 14, 1873.

MATTHEWS, WASHINGTON, ASSISTANT-SURGEON.—Assigned to duty at David's Island, New York Harbor. S. O. 59, Headquarters Military Division of the Atlantic, November 12, 1873.

SATURDAY, NOVEMBER 29, 1873.

ORIGINAL LECTURES.

MEANING AND HISTORY OF LARYNGOSCOPY AND KINDRED METHODS OF EXAMINATION.

A Lecture delivered at the University Medical College, New York,

BY LOUIS ELSBERG, M.D.,

Professor of Laryngology and Diseases of the Throat.

GENTLEMEN,—Among the means of making ourselves acquainted with diseases of the throat, laryngoscopy and kindred methods of exploration are by far the most important. We must to-day inquire into the meaning and history of these methods.

Laryngoscopy (*larynx*, and *scopeo*, to "view,") is a term used to designate the method of rendering the interior of the larynx accessible to view in the living subject.

Rhinology (*rhin*, the "nose," and *scopeo*) denotes the method of inspecting the interior of the nose and the pharyngo-nasal space. It is divided into *pharyngeal rhinology*, the method of inspecting these parts through the mouth, and *anterior rhinology*, the method of looking into the nostrils.

Œsophagoscopy is the method of dilating and inspecting the interior of the œsophagus.

Tracheoscopy is the mode of inspecting as much of the air-passages below the larynx as possible; and by *pertracheal laryngoscopy* and *tracheoscopy* are meant laryngoscopy and tracheoscopy practised through an opening into the trachea from without.

The principle upon which laryngoscopy is founded is very simple. It is that a small mirror, previously warmed to prevent its being tarnished by the breath, may, by means of a long handle, be introduced into the fauces, and so held there that rays of light entering through the widely-open mouth impinge against it and illuminate the organs to be examined, while the image of those organs is reflected into the eye of the observer. The theory is elucidated at a glance by a diagram representing some rays of light emanating in a horizontal direction from a luminous point, to impinge upon a plane surface directed obliquely downward, and to be reflected in accordance with the optical law that the angle of reflection is equal to the angle of incidence. It is on the same principle as that of which ladies avail themselves when they place in an oblique direction, outside of an upper front window, a mirror which reflects the image of the street and front door into the room, so that they can see who passes and who rings the bell, and be "at home" or "out," as they choose to instruct the servant, without any danger of being themselves seen. I am in the habit of explaining this principle still more familiarly by holding up my hand vertically, with closely-approximated fingers, and the thumb behind, so that the observer can see my thumb-nail

only by means of a mirror held above in an oblique direction.

On looking directly into a person's throat, we can see only in a horizontal direction; by means of the little mirror we can look "round the corner," or in a vertical direction, either downward into the larynx or upward into the pharyngo-nasal space. The parts brought under the control of the eye by laryngoscopy, and which otherwise are either completely invisible or seen only with difficulty and in rare instances, are the postero-inferior portion (base or root) of the tongue, the glossal insertion and posterior surface of the palato-glossal fold,* the glosso-hyoid folds, the posterior surface and portions of the tonsils, the infra-tonsillar glands, the supra-tonsillar glands, the glosso-epiglottic ligament or frænum, the glosso-epiglottic sinuses or valliculæ, the palato-pharyngeal fold, the pharyngo-epiglottic fold, the hyo-epiglottic ligaments, the capitulum of the hyoid bone, the epiglottis, the ary-epiglottic folds, the corniculum Wrisbergii or projecting extremity of the cuneiform cartilages, the nodules of Santorini or supra-arytenoid cartilages, the arytenoid cartilages, the inter-arytenoid fold, the posterior wall of the pharynx down to its contact with the arytenoid and cricoid cartilages, the pharyngo-laryngeal or pyriform sinuses, the upper cavity of the larynx with all its boundaries and contents, as the epiglottic cushions, central and lateral gutters, ventricular folds, entrances to the ventricles of Morgagni, the upper surfaces and free edges of the vocal bands, the vocal processes (the columella of Morgagni's gland, when sufficiently developed), and the anterior wall of the lower cavity of the larynx. The posterior part of the mucous membrane of the glottis, and portions of the lower cavity of the larynx, can usually not at all or but very imperfectly be seen.

Pharyngeal rhinology reveals the posterior surface of the soft palate, the upper posterior wall of the pharynx in its whole extent, with its tonsil-like glands, the orifices of the Eustachian tubes, the Rosenmüller's fossæ, the posterior nasal septum, the posterior nares, the mucous membrane covering the turbinated processes of the ethmoid bone, the mucous membrane of the posterior portion of the turbinated bone; in short, the whole pharyngo-nasal space, with its orifices, projections, etc. Under favorable circumstances, the eye reaches the covering mucous membrane of the nasal bones and of the plate of the ethmoid.

Anterior rhinology shows the interior of the nostrils, the anterior portion of the turbinated bone, a portion of the middle concha, and a portion of the floor and septum of the nasal cavity. Under very favorable circumstances, the posterior wall of the pharynx, and even the orifices of the Eustachian tubes, have been seen by Voltolini; while Czermak

* I adopt for the anterior and posterior half-arches the appellation proposed by Dr. Harrison Allen (see Transactions of the American Medical Association for 1872). The improved nomenclature in other respects, as, for instance, ary-epiglottic folds, ventricular folds, vocal bands, etc., I introduced a number of years ago. See, mainly, Transactions of the New York Academy of Medicine, vol. ii., part xii., 1863; Laryngoscopy, Medication, New York, Wood & Co., 1864; Transactions of the American Medical Association, 1865; and articles in various periodical publications.

has succeeded in recognizing in the dead subject the nasal opening of the lachrymo-nasal duct.

By œsophagoscopy we may see the upper portion of the interior of the œsophagus.

Tracheoscopy shows the anterior wall, and sometimes the lateral walls, of the trachea for a more or less considerable distance down,—under favorable circumstances, down to the bifurcation, and even the interior of the right bronchus.

Pertracheal laryngoscopy shows the inferior surface of the glottis, and various portions of the lower cavity of the larynx,—sometimes, also, portions of the upper cavity; and pertracheal tracheoscopy, portions of the walls of the trachea not otherwise visible.

In the practical application of these methods obstacles present themselves which we shall discuss in detail in subsequent lectures. They can usually be overcome by skill, patience, and perseverance. At first it was supposed that very few persons could bear the mirror in the mouth; but it was soon found, as Czermak had predicted it would be, that the difficulty arose chiefly from the inexperience and awkwardness of the investigator. The number of patients in whom the larynx and adjacent structures cannot be brought into view diminishes with increasing experience and ability of the examiner. The percentage, at first stated to be very high, gradually fell to twenty-five, as I reported it to be ten years ago: it has now, with experienced laryngologists, become so low that I am bound to say that a case of non-success is of quite rare and exceptional occurrence.

The value of the methods has long been, and by many still is, under-estimated; on the other hand, a few one-sided enthusiasts have gone to the other extreme. In the first place, the mere possession and use of the instruments do not enable every one to derive much benefit from them; for after we can see we do not necessarily know: we must be able to interpret what we see. Furthermore, as to diseases of the larynx, the mistake has been made of supposing that the laryngoscope is to take the place of all other means of recognizing pathological conditions; but, gentlemen, the laryngoscope is but *one* of the diagnostic means with which I shall endeavor to make you familiar, although in point of fact it is, as I said at the beginning of the lecture, the most important one of all. To ignore its value—as is done even to-day by many physicians—is a still greater mistake than to overestimate it, for, “whereas before we saw not, now we see.” In the practitioner’s encounter with laryngeal disease its non-employment or employment makes all the difference that exists between the condition of one who endeavors to grope his way in the gloom of the darkest night, and that of one who walks securely under the light of the mid-day sun.

In pursuing the history of any important discovery or invention, we cannot fail to be struck with the steady but gradual march of improvement. Although the discoveries of a Galileo, a Newton, or a Columbus, of a Jenner, a Harvey, or a Bichat, and the inventions of a Gutenberg, a Fulton, or a Davy, of a Chamberlain, a Laennec, or a Helmholtz,

may, when their practical results are worked out, burst like a lightning-flash upon the world at large, the patient student finds the road leading to them covered with forerunners and prophets. Perchance he finds a long record of vain endeavors and fruitless labors, of partial or unrecognized success. He finds how near many a man has been to a grand invention “without making it;” how many times a principle discovered has been allowed to slumber long before being applied to what afterwards seem obvious practical uses; and how often an improvement demonstrated has fallen into oblivion until rediscovered or revived. All this but shows that human knowledge progresses not by sudden leaps, but with continuous, measured steps, and not in a straight line, but in a spiral.

Laryngoscopy forms no exception to the rule here implied. Dentists seem to have used a little mirror in the mouth for their purposes from time immemorial; but who first conceived the idea of so introducing a mirror into the fauces as to reflect and permit inspection of the interior of the larynx, it is impossible to say. Paul of Ægina described, under the name of *glossotochus*, an instrument for inspecting the mouth and pharynx,—possibly the same or nearly the same as the *speculum oris* described and figured by Ambroise Paré (Op., Lyon, 1641, p. 190), Fabricius Hildanus (Op., Francofurti ad Mœnum, 1646, p. 1042), Scultetus (Armentarium Chirurgicum, 1655), and others.* More than a hundred and twenty-five years ago, Levret, of Paris, employed a mirror in the exploration of the fauces, and successfully used it in operating on polypus in the throat, as the extension of nasal polypus.† More than sixty years ago, Bozzini, of Frankfort-on-the-Main, in a pamphlet on *The Illumination of the Cavities and Internal Spaces of the Living Animal Body*,‡ described what he calls a very simple instrument for examining the throat, but what in its entirety was really so complicated and cumbrous an apparatus that it was soon forgotten. To both Levret and Bozzini I shall refer again when speaking of the history of rhinoscopy.

Nearly fifty years ago, Cagniard de Latour, the celebrated physicist, endeavored to behold the living vocal bands in working-order by introducing a small mirror into the back of the throat; and, although he did not succeed in seeing more than the epiglottis, he was, so far as is at present known, the first who practised laryngoscopy.§

* For the references mentioned I am indebted to Sir George Duncan Gibb. See his various publications on the subject, but especially *The Laryngoscopy in Diseases of the Throat*, third edition, London, 1868, p. 3.

† *Observations sur la Cure radicale de plusieurs Polypes de la Matrice, de la Gorge et du Nez, opérée par de nouveaux Moyens inventés par M. Levret, Maître en Chirurgie, etc.* Paris, Delaguerre, 1749, pp. 106 and 500, plates 6.

‡ *Der Lichtleiter oder Beschreibung einer einfachen Vorrichtung und ihrer Anwendung zur Erleuchtung innerer Höhlen und Zwischenräume des lebenden animalischen Körpers.* Von Philipp Bozzini. Weimar, 1807, pp. 6 and 23, plates 4.

§ “M. Cagniard de Latour s’est ensuite introduit dans le fond de l’arrière-gorge un petit miroir, espérant qu’à l’aide des rayons solaires et d’un second miroir, il pourrait apercevoir l’épiglotte et même la glotte; mais par l’emploi de ces moyens il n’a pu découvrir que l’épiglotte, et d’une manière imparfaite.”—*Journal de l’Institut*, No. 225, quoted in *Physiologie de la Voix et de la Parole*, par le Dr. Edouard Fournié, Paris, Adrien Delahaye, 1866, p. 352. Fournié, in his “*Etude pratique sur le Laryngoscope*,” etc., Paris, 1863, p. 8, gives to Gerdy the credit of having been the first to examine the throat with the mirror; but that is a mistake.

A few years later, Senn, of Geneva, tried in the same manner, but with no better success, to inspect the interior of the larynx of a child on whom he was about to perform tracheotomy. He ascribed his failure to the small size of his mirror; while Morell Mackenzie* thinks it arose really from the non-illumination of the larynx. Senn insisted, however, upon the possibility and value of the practical employment of the mirror at least in adults, and recommended its use in suitable cases.†

On the 18th of March, 1829, Benjamin Guy Babington, of London, at a meeting of the Hunterian Society, exhibited an instrument which he proposed to call a *glottiscope*. "It consisted of an oblong piece of looking-glass, set in silver wire, with a long shank. The reflecting portion is placed against the palate, whilst the tongue is held down by a spatula, when the epiglottis and upper part of the larynx become visible in the glass. A strong light is required; and the instrument should be dipped in water, so as to have a film of the fluid upon it when used, or the halitus of the breath renders it cloudy."‡ It is claimed§ that Dr. Babington invented and employed this instrument without having any knowledge of the previous labors in the same direction, and he is called the "real discoverer," the "original inventor," etc.

On the other hand, it has been said|| that he could not well have obtained a view of the vocal cords, much less of parts beyond, because, instead of elevating, he depressed the epiglottis; and he himself, more recently, has declared "that he had seen ulceration on the epiglottis, but he confessed that he did not contemplate looking through the glottis."¶

In 1832, Selligues, a mechanician of Paris, himself a patient, independently of his predecessors, devised a laryngeal mirror attached to the extremity of a tube, the light being thrown upon it through another tube. With this apparatus Beninati is said to have obtained a view of the whole interior of the larynx.** After the same pattern Sanson made a laryngeal speculum for Drs. Trousseau and Belloc in 1836; but Trousseau himself is said to have stated that he had never employed it,†† and in their book it is by no means favorably spoken of.‡‡

* Description of the First Laryngoscope, etc.,—London Lancet (American edition), July, 1864, p. 412.

† "Je fis construire un petit miroir pour le porter au fond du pharynx et chercher à voir la partie supérieure du larynx et de la glotte; mais je renonçai à son emploi, vu la petitesse de l'instrument. Toutefois je crois que ce moyen peut être employé," etc. The case reported by Senn occurred in the year 1827, and was brought before the Paris Academy by Dupuytren and Duméril on the 10th of December of that year, but the account of the attempted laryngoscopy was not published until two years later, viz., in the Journal des Progrès, 1829, p. 231; this is doubtless the reason why Verneuil fixes its date as 1829 in his article on the history of laryngoscopy in the Gazette hebdomadaire de Médecine et de Chirurgie, Paris, 1863, x., No. 13.

‡ London Medical Gazette, March 28, 1829, vol. iii. p. 555.

§ Thomas Windsor on the Discovery of the Laryngoscope,—British and Foreign Medico-Chirurgical Review, January, 1863, p. 200; Morell Mackenzie, Description of the First Laryngoscope, *loc. cit.*; George D. Gibb, Proceedings of the Royal Medical and Chirurgical Society; London Lancet (Am. ed.), July, 1864, p. 412, etc., etc.

¶ Merkel, Die neueren Leistungen auf dem Gebiete der Laryngoskopie, Schmidt's Jahrbücher, vol. cxix., 1863, No. 79; Moura-Bourouillon, Gazette hebdomadaire, 1863, x., No. 13.

|| Report of the Proceedings of the Royal Medical and Chirurgical Society; London Lancet (Am. ed.), July, 1864, p. 413.

** Physiologische und pathologische Studien über die menschliche Stimme. Von F. Bennati. Aus dem Französischen in's Deutsche übersetzt. Mit 3 lithographischen Tafeln. Weimar, Voigt, 8vo, 1833.

†† Merkel, *loc. cit.*, probably after Moura-Bourouillon, *loc. cit.*

‡‡ "Cet instrument, dont il ne faut point s'exagérer l'utilité, est d'une ap-

plication très-difficile, et il n'est guère plus d'un malade sur dix qui puisse en supporter l'introduction. Il est une difficulté qui à elle seule suffirait pour dégoûter à jamais de se servir de cet instrument, c'est la présence de l'épiglote. Cet opercule à une grande largeur, et il recouvre si exactement la partie supérieure du larynx qu'il empêche totalement que la représentation de cet organe puisse être répétée dans le miroir; et de plus, la lumière projetée sur l'instrument tombe directement et nécessairement sur la face linguale de l'épiglote, et l'ombre de celle-ci couvre précisément le larynx et le dérobe complètement à la vue." Trousseau et Belloc, Traité pratique de la Phthisie laryngée, de la Laryngite chronique, et des Maladies de la Voix, Paris, 1837, p. 179.

In 1840, Liston, of London, speaks of the laryngeal mirror in connection with "ulcerated glottis."|||

In 1844, Warden, of London, invented a prismatic speculum with which he succeeded in seeing the interior of the larynx.¶¶

In 1846, Avery, of London, invented an apparatus for the examination of the larynx, consisting of an illuminating lamp and mirror, both supported by one stem, which was to be held between the operator's teeth, and a tube with a small mirror placed at one end at an angle of forty-five degrees, which was to be introduced into the patient's mouth.***

Eyrel, of Vienna, a music-teacher, claims to have used, also in 1846, for the same purpose, a rectangular glass prism fastened to one end of a wooden stem, while a mirror was fastened to the other.†††

Jacobi, of New York, had an oval glass mirror made in 1854, one and a half inches long and one inch broad, and attached to a flexible metal handle, with which he states he "succeeded in seeing the interior of the larynx of a gentleman who, having constitutional syphilis, had long attributed a morbid sensation in the region of the larynx to the probable presence of syphilitic ulcerations; but repeated inspection showed that there were no such local lesions."††††

Garcia, a Spaniard, a *maestro* of singing (brother of Madame Malibran), while residing in Paris and London, employed the laryngeal mirror, principally on himself, but also on other healthy persons, in order to study the mechanism of the human voice, and his researches were read before the Royal Society

plique très-difficile, et il n'est guère plus d'un malade sur dix qui puisse en supporter l'introduction. Il est une difficulté qui à elle seule suffirait pour dégoûter à jamais de se servir de cet instrument, c'est la présence de l'épiglote. Cet opercule à une grande largeur, et il recouvre si exactement la partie supérieure du larynx qu'il empêche totalement que la représentation de cet organe puisse être répétée dans le miroir; et de plus, la lumière projetée sur l'instrument tombe directement et nécessairement sur la face linguale de l'épiglote, et l'ombre de celle-ci couvre précisément le larynx et le dérobe complètement à la vue." Trousseau et Belloc, Traité pratique de la Phthisie laryngée, de la Laryngite chronique, et des Maladies de la Voix, Paris, 1837, p. 179.

§§ "A l'extrémité d'une tige de bois ou de balaine cylindrique est placé un miroir de la largeur d'une pièce de deux francs, dont on peut faire varier l'inclinaison à l'aide d'une vis de rappel. Par ce moyen on peut reconnaître facilement les inflammations, engorgements ou ulcérations que l'on ne pouvait que soupçonner, à l'extrémité postérieure des fosses nasales, au larynx et dans quelques parties du pharynx. L'usage de cet instrument, très-facile d'ailleurs, est d'une utilité incontestable." Comptes-Rendus des Travaux de la Société de Médecine de Lyon, depuis le 1^{er} Juillet, 1836, jusqu'au 30 Juin, 1838, sous la Présidence de M. Janson, par L. A. Rouquier, Lyon, 1840, p. 62.

|| "A view of the part may sometimes be obtained by means of a speculum, such a glass as is used by dentists, on a long stalk, previously dipped into hot water, introduced with its reflecting surface downward and carried well into the fauces." Robert Liston, Practical Surgery. With Fifty Engravings on Wood. Third edition, London, 1840, p. 417.

¶¶ "The epiglottis was immediately seen, but it was only when efforts to swallow were made that the arytenoid cartilages and glottis were raised out of concealment and brought brilliantly to show their picture in the reflecting face of the prism."—A. Warden, London Medical Gazette, May 24, 1844, vol. xxxiv. p. 256; London and Edinburgh Monthly Journal of Medical Science, vols. iv., v., 1844-1845,—more especially vol. v. p. 552; Windsor, *loc. cit.*

*** Avery had published no description of his instrument, but had shown it to many medical men of London. Vide Medical Times and Gazette, vol. ii., 1860, p. 111; Yearsley, Introduction to the Art of Laryngoscopy, London, 1862; Gibb, Diseases of the Throat and Windpipe, second edition, London, 1864, p. 443, etc.

††† Physiologie der menschlichen Tonbildung, nach den neuesten Forschungen gemeinfasslich dargestellt. Leipzig, 1860, p. 140.

†††† Verbal communication made to me some years ago.

of London on the 24th of May, 1855.* His manner of proceeding he describes as follows:

"It consists in placing a little mirror, fixed on a long handle suitably bent, in the throat of the person experimented on, against the soft palate and uvula. The party ought to turn himself towards the sun, so that the luminous rays falling on the little mirror may be reflected on the larynx."

For autolaryngoscopy, or examination of one's own larynx, he adds, "The little mirror is illuminated by means of a second one destined to receive the rays of the sun. The image is reflected first on the little mirror, whence it is sent to the external mirror."†

Cutter, of Woburn, in Massachusetts, invented in 1856 an instrument, at present in my possession, with which the laryngeal cavity and surrounding parts can be well inspected. It consists of a hollow cylinder of metal, open at one end, with a square opening at the bottom near the other extremity, in which a prismatic reflector is immovably fixed.

But, notwithstanding all that had thus been accomplished, laryngoscopic explorations remained only isolated experiments, not followed by important results as to practical medicine, until subsequent to the employment of a mirror for examining laryngeal diseases by Ludwig Türck, of Vienna, at the Vienna General Hospital, in the summer of 1857, and the investigations of Johann N. Czermak, of Cracow, but at the time residing in Vienna, during the winter of 1857-8. Indeed, it is probable that the whole of the interior of the larynx and trachea to its bifurcation had not really been *distinctly* seen in the living body previous to that time. In the spring of 1858, Czermak‡ and Türck§ pressed the subject upon the attention of the medical profession, and thence it became widely known and appreciated. From that time forward, laryngoscopy rapidly grew into favor and importance. Its literature has become quite extensive, and its history since the year 1858 is to be gathered from the practice of the laryngologists of to-day.

A lamentable circumstance in the history of laryngoscopy is the contest for credit as to "priority" waged by Drs. Türck and Czermak. They might safely have left the profession to judge between them, without indulgence in personal crimination and recrimination. The facts in the case are clearly before the medical world, and its verdict has accorded to each his due. The French Academy has rewarded both alike;|| and neither

should have profaned the mutual work by "claiming to be worthiest." Great credit is due to Türck for his careful experiments on the dead as well as on the living; for his consistent zeal and industry in medical laryngoscopy, both before and after he realized its full importance by Czermak's success; for his varied exertions to contrive instruments to facilitate and improve laryngoscopic diagnosis, medication, and surgical operations; for his investigation and application of the catoptric principles of the method; for the instructive pathological cases which he conscientiously examined, treated, and reported; and, finally, including all the preceding, for practically reviving laryngoscopy for medical purposes, and for the enduring monument that he has erected for himself in his "Clinic of the Diseases of the Larynx and Trachea,"—the most elaborate, able, and classical work published in the field of laryngology.¶

To Czermak great credit is due for his thorough and enthusiastic researches with the instruments first lent him by Türck; for having immediately perceived "that the laryngoscopic method would prove of great importance and of varied application;" for bringing it prominently to the notice of the profession at large; for popularizing it, by personal demonstrations all over Europe, having by dint of great perseverance acquired unequalled dexterity with it; for enlarging its sphere of usefulness in every respect, by improved apparatus and new applications; indeed, for being the great diffuser and teacher, through whose instrumentality mainly the laryngoscope has become one of the recognized, daily-used, practical appliances of medicine.

While most of those whose names are connected with its early history conceived the idea of the laryngoscope independently of each other, it is perfectly plain, from our historical sketch, that neither Prof. Czermak nor Prof. Türck could lay any claim to "priority" in the way of being a prime mover in the invention or discovery of laryngoscopy. In their labors for its advancement, however, both have been good and faithful workmen in the cause of science and humanity, and in the records of this

"Très-pen de temps après, dans l'hiver 1857-1858, M. Czermak se servit des miroirs laryngiens que lui avait prêtés M. Türck pour compléter les études physiologiques de M. Garcia, et pour observer le larynx dans la formation de certains sons, ceux des voyelles dites gutturales.

"M. Czermak a remis à l'Académie son Mémoire sur le laryngoscope en 1860, et il a démontré ses expériences devant la Commission. M. Türck a envoyé comme réclamation de priorité plusieurs publications, et plus tard un dernier Mémoire sur l'emploi du laryngoscope dans les maladies du larynx et du pharynx.

"La Commission n'a pas voulu entrer dans les discussions de priorité soulevées par MM. Türck et Czermak.

"La Commission a pensé que les recherches de M. Türck et celles de M. Czermak étaient celles qui avaient le plus contribué à faire de la laryngoscopie une méthode usuelle et susceptible de rendre des services dans le diagnostic des maladies du pharynx et du larynx; elle propose d'accorder à chacun de ces ingénieux observateurs une mention honorable.

"Sur la proposition de la Commission, l'Académie décide: 'Qu'une somme de douze cents francs sera jointe à chacune des deux Mentions accordées à MM. Türck et Czermak.'—Extrait du rapport sur les prix de médecine et de chirurgie, concours de 1860, Institut Impérial de France, Académie des Sciences, séance publique du lundi, 25 Mars, 1861.

"Klinik der Krankheiten des Kehlkopfes und der Luftröhre. Nebst einer Anleitung zum Gebrauche des Kehlkopfstachenspiegels und zur Lokalbehandlung der Kehlkopfkrankheiten. Von Dr. Ludwig Türck, A. O. Prof. an der Universität zu Wien, und Primararzt im K. K. Allgemeinen Krankenhause. Mit 260 dem Texte eingedruckten Holzschnitten und 1 Steindrucktafel." This great work, with a superb atlas, was published at the close of the year 1866, and its author died on the 25th of February, 1868.

* Observations on the Human Voice, by Manuel Garcia. Proceedings of the Royal Society, vol. vii. p. 399; Philosophical Magazine and Journal of Science, vol. x. p. 218; Gazette hebdomadaire, Nov. 16, 1855, No. 469; Schmidt's Jahrbücher, lxxix. p. 160, etc.

† Note addressed, January, 1861, by M. Garcia to M. Richard: *vide* Notice sur l'Invention du Laryngoscope, par Paulin Richard, Paris, 1861, p. 11.

‡ Wiener Medizinische Wochenschrift, No. 13, March 27, 1858, etc., etc. § Zeitschrift der Kaiserlich Königlich Gesellschaft der Aerzte zu Wien, No. 17, April 26, 1858 (report of meeting of April 9), etc., etc.

|| "Dans l'été de 1857 M. le docteur Türck, médecin en chef de l'hôpital général de Vienne, se livra à des recherches de laryngoscopie, dans le but de trouver une nouvelle méthode de diagnostic pour les maladies du larynx. La méthode de M. Türck, comme celle de M. Garcia, est fondée sur l'emploi d'un miroir laryngien. M. Türck apporta à ce miroir des modifications et lui fit subir des changements de forme, dans le but de rendre l'instrument plus facile à supporter par les malades, sur lesquels ce mode d'exploration produisit souvent des efforts de vomissements ou des sensations désagréables qui peuvent rendre très-difficile son usage. Comme M. Garcia, M. Türck se servait, dans ses premières recherches, de la lumière du soleil pour éclairer le miroir.

cause both will ever have "*une mention honorable*."*

As to pharyngeal rhinoscopy, I have already mentioned the names of Levret and Bozzini. Levret speaks of his *speculum oris* in several publications, and describes it in detail and figures it in his work on polypus. Consisting essentially of a metallic plate placed upon the tongue, the polished reflecting surface upward, it may occasionally have illuminated and well shown portions of the pharyngo-nasal space.†

With Bozzini's apparatus, which consisted mainly of two mirrors inclined towards each other under an angle of about forty-five degrees and fixed in a tube having a large opening immediately over their reflecting surfaces, one certainly could see behind the palate.‡

In 1838, Baumès, and in 1848, Avery, made rhinoscopic investigations.§ It has been stated by Czermak,|| Semeleder,¶ Türck,** Gibb,†† Mackenzie,‡‡ and others, that Wilde, of Dublin, had had the idea or had attempted to examine the orifice of the Eustachian tube from the oral cavity by the aid of a small mirror; but the very passage in Wilde's work upon which alone this statement can be based refers to a case of "complete occlusion of the naso-pharyngeal opening, owing to adhesion of the velum palati to the back and sides of the pharynx, the result of syphilitic ulceration," and the object of introducing, dentist-like, a small mirror into the mouth was not only not to practise rhinoscopy, but to confirm the thorough union of the parts, and, therefore, the obliteration of all communication between the oral and nasal cavities. §§

* Since writing the above, the sad news has reached us that Czermak's labors, too, are ended. He died September 16.

† "Il faut, pour opérer au fond de la gorge, se rendre maître de la mobilité de la machoire inférieure et de la langue; les divers *speculum oris* ou miroirs de la bouche qu'on nous a donnés jusqu'ici (voyez l'Arsenal de Sautet, table 11, fig. 4, etc., Ambroise Paré et le Dictionnaire ci-dessus cité, tome 3, planche 11, fig. 12 et 13) m'avoient paru fort gênant dans la pratique, et capable de causer de la douleur; je doutais d'ailleurs de pouvoir par leur moyen maîtriser la langue comme je le voudrais; j'en imaginai donc un nouveau que représente la fig 15, planche 4. Cet instrument rend, tout à la fois, la langue immobile, il tient la bouche ouverte sans qu'elle puisse se fermer, et au moyen d'une plaque polie, qui fait son corps, il réfléchit catoptriquement les rayons lumineux dans le lieu qu'occupe le polype; il est aussi très-aisé à mettre en place, et pour l'y tenir il ne faut que lier derrière la nuque les rubans qui sont attachés à ses deux extrémités." Observations sur la Cure radicale de plusieurs Polypes de la Matrice, de la Gorge et du Nez, Paris, Delaguet, 1749, pp. 294 et 295.

‡ "Will Man daher in einem Winkel sehen, z. B. einen Theil des Schlundes, oder hinter den hängenden Gaumen in die Nasenhöhlen, so müssen die Strahlen gebrochen werden und erfordern Spiegel für die Licht-Reflectionsleitung." Bozzini's Lichtleiter, eine Erfindung zur Anschauung innere Theile und Krankheiten, Hufeland's Journal der prakt. Heilkunde, vol. xxiv., 1 Stück, p. 116.

§ Windsor (*loc. cit.*) refers—without having read them, however—to the following additional articles on Bozzini's invention, viz.: Salzburg. Med.-Chir. Zeit., 1806, iii. pp. 317, 319; 1807, i. p. 271; Siebold, Lucina, iv. p. 167; Journal der Erfindungen, 3 St. p. 89; this last article being to the effect that the instrument is of no use.

¶ Comptes-Rendus des Travaux de la Soc. de Méd. de Lyon, *loc. cit.*; and Gibb, Diseases of the Throat, etc., *loc. cit.*

|| Wiener Medizinische Wochenschrift, No. 17, 1860.

¶ Die Rhinoskopie und ihr Werth für die ärztliche Praxis. Ein monographischer Versuch von Dr. Friedrich Semeleder, Dozenten an der Wiener Hochschule, etc. Mit 2 chromolithographischen Tafeln. Leipzig, Wilhelm Engelmann, 1862, p. 1. The same, translated into English by Edward T. Caswell, M.D., New York, William Wood & Co., 1866, p. 3.

** Klinik der Krankheiten des Kehlkopfes und der Luftröhre, p. 16.

†† The Laryngoscopy in Diseases of the Throat, with a Chapter in Rhinoscopy. By Sir George Duncan Gibb, Bart., M.D., LL.D., etc., 3d ed., London, 1868, p. 147.

‡‡ The Use of the Laryngoscope in Diseases of the Throat, with an Appendix on Rhinoscopy. By Morell Mackenzie, M.D. Lond., M.R.C.P., etc. Third edition, Revised and Enlarged, London, 1871, p. 159.

§§ "There is no vestige of uvula remaining, and examination with a small mirror does not show any aperture whatever throughout the whole length of the cicatrix." Practical Observations on Aural Surgery and the Nature and Treatment of Diseases of the Ear. With Illustrations. By William R. Wilde. Philadelphia, 1853, p. 347.

There can be no doubt that to Czermak|||| belongs the undivided merit of having formed rhinoscopy into a method, of having named it, demonstrated and defended its feasibility and usefulness, and the crowning glory of having "enlisted fellow-laborers in its practice and given it a future."

The number of physicians who can be induced to take up any such "innovation" is necessarily always limited; and for some time after the introduction of the laryngoscope this instrument occupied attention almost exclusively. But in the spring of 1860 rhinoscopy received an impetus by the publication, by Czermak, of the first pathological rhinoscopic observation, made February 22 and 25 and March 8, 1860.¶¶

Semeleder, who had enjoyed peculiarly favorable opportunities for mastering the new method, at once followed with a detailed description;*** and Voltolini,††† Türck,‡‡‡ Stoerk,§§§ and others, about the same time, not only discussed it in various German and foreign journals, but attracted general attention by successfully practising it in aural and other diseases. Czermak then transplanted it by his celebrated personal demonstrations to France and England, and, before the first half of the year 1860 had passed away, the demonstrations of Stangenwald||||| and a few others had led also to the employment of the rhinoscope in America.

Since that time the disciples of rhinoscopy have steadily augmented in number, and have gained in ability to make practical use of it: still, the method itself has not progressed to its proper place in professional esteem with the same triumphant "quick-step" as laryngoscopy. Its domain being really less known and more difficult to explore, its advance has necessarily been more slow and apparently less brilliant. Its paramount importance, or, I may say, absolute indispensableness, for the diagnosis and treatment of various affections of the pharyngo-nasal space (comprising certain cases of catarrh, deafness from disease in the region of the orifice of the Eustachian tube, etc.), is even to-day not sufficiently appreciated. It has given ample proof, however, of its practical value, and its published literature comprises many exceedingly interesting cases in point.

Anterior rhinoscopy was at first practised by means of an ordinary ear-speculum; then Markusowski, of Pesth, constructed a bivalve dilator, which I have replaced by Elsberg's nasal speculum. Thudichum, of London, devised a spring speculum; Folsom, of New York, a wire nasal speculum adapted from an eye-speculum; and Degen, of Dresden, and Fraenckel, of Berlin, a double wire speculum, which stretches open both alæ of the nose at the same time.

Œsophagoscopy was originated by Lewin, of Berlin. Others have made endoscopic experiments

|| Wiener Med. Wochenschrift, No. 13 and No. 16, 1858; On the Inspection of the Pharyngo-nasal Cavity, Wiener Med. Wochenschrift, No. 32, 1859, August 6, etc., etc.

¶ Wiener Med. Wochenschrift, No. 17, 1860.

*** Zeitschrift der Gesellschaft der Aerzte zu Wien, No. 19, 1860.

†† Deutsche Klinik, No. 21, 1860.

‡‡ Zeitschrift der Gesellschaft der Aerzte zu Wien, No. 21, 1860.

§§ Zeitschrift der Gesellschaft der Aerzte zu Wien, No. 26, 1860.

¶¶ Proceedings of the New York Medico-Chirurgical College, June 14, 1860; American Medical Monthly and New York Review, vol. xiv., No. 1, July, 1860, p. 18.

with what they called the gastroscope and electrical illumination in glass tubes, but no practical results had been obtained. The honor of having extended the principle of laryngoscopy to the inspection of the œsophagus, dilated for the purpose by means of forceps, is due entirely to Lewin, who exhibited his instruments and demonstrated their application before the Medical Society of Berlin early in 1860. He brought into view the mucous membrane of the œsophagus for four inches down.*

Voltoini, of Breslau, took up the subject and experimented on himself, but was forced to desist temporarily because the practice became too irritating to his throat.†

In the winter of 1862, Semeleder performed œsophagoscopy both on himself and on a patient, and in the latter succeeded in inspecting the lowest edge of the cricoid cartilage,—i.e., more than an inch down into the œsophagus.‡ Soon after, I employed the method in several cases with an improved forceps, and obtained views of the upper portion of the œsophagus.§

Bevan, of London, in 1868, described and figured an œsophagoscope consisting of a tube about four inches long and three-fourths of an inch in diameter, and having a couple of screws and attachment which allow of its easy insertion and adjustment to any angle; to be introduced into the œsophagus and to be united with a tube carrying a mirror which is held in the mouth.||

In 1868, Waldenburg, of Berlin, published the account of a new œsophagoscope, which essentially consisted of two cylindrical tubes sliding in each other, attached movably to a handle, these tubes to be introduced into the œsophagus to take the place of the forceps for keeping the œsophagus open; the mirror and other accessories being the same as for laryngoscopy.¶ More recently, Waldenburg has modified the apparatus by having three rods, somewhat like a wire uterine speculum, to allow of the inspection of the lateral walls of the upper portion of the œsophagus.**

Tracheoscopy down to the bifurcation of the trachea was first accomplished by Elfinger, of Vienna, in Czermak's throat, in April, 1858,†† after which time Czermak himself,‡‡ Semeleder,§§ Lewin,||| Türk,¶¶ and others, confirmed its truth,

and Türk was the first to see distinctly the right bronchus.***

Pertracheal laryngoscopy as well as pertracheal tracheoscopy was devised by Neudörfer, of Vienna,††† but, though he practised it considerably on the dead subject, Czermak was the first to perform it on the living.†††

ORIGINAL COMMUNICATIONS.

CASE OF OPIUM-POISONING—USE OF ATROPIA.

BY H. S. SCHELL, M.D.

AT 7.30 P.M., November 8, 1873, I was called to see L. M., a young woman, who at six o'clock the same evening had taken one and a half fluid-ounces of laudanum for the purpose of destroying her life. I found her unconscious, her extremities cold, muscles relaxed; pulse 60, and full, but not strong; respiration snoring; face of a dusky hue; irides immobile, pupils about $\frac{1}{32}$ inch in diameter, and corneæ insensible.

I had brought with me a couple of yards of india-rubber tubing of small diameter, and a syringe, and, after passing one end of the tube into the stomach, and starting the fluid in motion through it by the syringe, I allowed the other end to fall into a basin by the bedside and thus act as a siphon. In this way a couple of ounces of brownish fluid, smelling somewhat of laudanum, were discharged, when the flow ceased, and could not be again started. While preparing to inject some warm water to wash out the stomach, the tube was accidentally drawn out of the œsophagus, and I was unable to re-introduce it. She had taken no food during the day, and the brownish fluid was evidently mostly beer, of which she had drunk a glass a short time before taking the laudanum. I thought it better, however, to give her an emetic of mustard and salt, to get rid of whatever laudanum might remain; but it was with the greatest difficulty she was sufficiently aroused to be induced to swallow it. I gave her at the same time thirty drops of the tincture of belladonna, and repeated the latter every fifteen minutes until after ten o'clock. The emetic, not acting, was repeated in twenty minutes, and in twenty minutes thereafter was followed by a scruple of sulphate of zinc, and the fauces were tickled with a feather; all without result.

At 9.30 the pulse was somewhat more frequent, but weaker; the condition of the respiration and temperature of the surface remained about the same; and I now noticed for the first time that the optic axes were considerably divergent, the eyeballs being also rolled somewhat upward.

At 10.15, after rousing her to give her a dose of tincture of belladonna, there was an almost convulsive struggle of resistance, attended by violent excitement, and followed by sudden and complete col-

* Die Laryngoscopie: Beiträge zu ihrer Verwerthung für praktische Medizin. Aus den Vorträgen und Demonstrationen in der Gesellschaft für wissenschaftliche Medizin und dem Vereine Berliner Aerzte. Von Georg Lewin, praktischem Aerzte zu Berlin. Berlin, August Hirschwald, 1860, p. 4 and p. 14.

† I have not been able to procure Dr. Voltoini's own account of these experiments, but take them from Semeleder's work, "Die Laryngoskopie und ihre Verwerthung für die ärztliche Praxis," Wien, Wilhelm Braumüller, 1863, p. 29.

‡ Wiener Medizinal Halle, ii. 34, 1862; *op. cit.*, pp. 28, 29, 30; Rhinoscopy and Laryngoscopy; their Value in Practical Medicine. Translated from the German by Edward T. Caswell, M.D. New York, William Wood & Co., 1866, p. 97, et seq.

§ Remarks before the New York County Medical Society, November 2, 1863, American Medical Times, December 26, 1863.

|| Lancet, April 11, 1868, p. 470.

¶ Berliner Klinische Wochenschrift, No. 48, 1870.

** Berliner Klinische Wochenschrift, No. 44, 1871.

†† Der Kehlkopf-Spiegel und seine Verwerthung für Physiologie und Medizin. Eine Monographie von Dr. Johann N. Czermak, ord. Professor der Physiologie an der K. K. Universität in Pest. Leipzig, 1860, p. 9, p. 45, etc.

‡‡ Wiener Med. Wochenschrift, No. 16, 1859.

§§ Allgemeine Wiener Medizinische Zeitung, No. 40, 1859.

||| Die Laryngoscopie; Beiträge, etc., p. 24.

¶¶ Allgemeine Wiener Medizinische Zeitung, Nos. 8 and 9, 1860.

*** Zeitschrift der K. K. Gesellschaft der Aerzte zu Wien, No. 21, 1860.

††† Oesterreich. Zeitschrift für praktische Heilkunde, iv., No. 46, 1858.

††† Wiener Med. Wochenschrift, No. 11, 1859.

lapse. There was an entire cessation of respiration, the pulse was barely perceptible, the face pale, lips livid, pupils unchanged, and eyes rolled up and outward to the extreme limits of their orbits.

As shaking, slapping, the cold douche, etc., failed to re-excite the act of breathing, I commenced artificial respiration by Marshall Hall's method; and, after keeping it up for ten minutes without improvement, I instructed an assistant how to continue it, and returned to my office for my hypodermic syringe, at the same time sending for a solution of the sulphate of atropia, gr. j ad f3j. On my return, ten minutes afterwards, I found her in the same condition as when I left; not an inspiration being drawn except by the artificial method, and only the feeble fluttering of the heart to show that she was still living.

I at once, however, injected $\frac{1}{4}$ grain of atropia under the skin of the arm, and in a short time had the satisfaction of seeing a natural act of inspiration, and of finding a decided pulse again under my fingers, beating at the rate of 108 in the minute. The pupils soon dilated to $\frac{1}{16}$ inch, and she vomited five or six ounces of fluid. Artificial respiration was of course discontinued, but in a short time the pulse fell again to 90, alarming symptoms reappeared, and twenty minutes after the first injection of atropia I repeated it. The pulse soon rose again. There was copious emesis, but no odor of opium about the ejected fluid. She asked for water, which was given freely, and in the half-unconscious intervals of vomiting she kept up a pretty general scratching of the surface of the body, and rubbing of the nose, showing that she was beginning to be annoyed by the action of the opium upon the skin.

In a little while, however, there was a diminution of the pulse-rate, return of coma, etc., and in half an hour from the last injection I repeated the atropia. The effect now seemed to be more permanent; the pulse rose to 110 and became stronger, the pupils dilated to a little over $\frac{1}{8}$ inch in diameter, and remained so, responding, however, to the action of light. She complained of seeing objects double, and was very tremulous.

When I left her, after 1 A.M., she was dozing quietly, could be easily aroused, her respiration was full, skin warm, pulse 100 and moderately strong, and she had still some divergence of the optic axes.

When I saw her the next morning at 10 o'clock she was sitting by the stove, apparently quite well: the derangement of vision had disappeared, but the thickly-coated tongue and occasional nausea were evidences of considerable derangement of the stomach.

I learned that she had had abundant diuresis during the night; but, owing to accidental circumstances, I was unable to procure a specimen of the urine for examination.

The principal point of interest in connection with this case is the striking manner in which it illustrates the stimulant effect of atropia in moderate doses upon the par vagum.

As to its action upon the gastric branches, it will be remembered that the stomach first responded to

the action of the emetics about two hours after they were taken, and in a few minutes after the first hypodermic injection, and freely after the second one.

Tincture of belladonna had been previously given by the mouth, and about f3ss had been used from the bottle containing it; but, in consequence of the difficulties attending the administration, it is probable that not more than f3ijj were actually swallowed. Owing, however, to the lethargic condition of the stomach, produced by the opium, I imagine that but little of the three fluidrachms was absorbed, and that the most of it was afterwards vomited.

In the case of a man who had taken thirty grains of opium and ten or twelve ounces of whisky,—reported by Dr. McGee,*—the use of various emetics for a couple of hours produced no result; but, after the subcutaneous injection of $\frac{1}{4}$ grain of atropia, free vomiting took place immediately.

In Dr. Walker's case,† a girl fifteen years old had taken six or eight grains of opium, and emetics were used ineffectually until after the hypodermic injection of $1\frac{1}{2}$ grains ext. belladonna.

In Dr. Todd's case,‡ of a man of intemperate habits, who had taken tr. opii f3x, emetics failed to excite vomiting. Atropia was administered subcutaneously at 10.30 P.M., but there was no emesis until after he had been violently rolled about the bed at 3 A.M. In this instance the stomach was probably unusually callous to impressions, in consequence of the habits of the individual.

The action of the remedy upon the cardiac branches of the pneumogastric is seen in the manner in which the pulse rose and strengthened after each use of the hypodermic syringe.

As to the lungs, it has been seen that the use of artificial respiration continued for twenty-five or thirty minutes produced in that time no action of the respiratory muscles, but that the breathing became regular and natural soon after the use of atropia.

I should conclude, therefore, that when the patient is in a comatose condition when first seen, it would be better to administer $\frac{1}{60}$ to $\frac{1}{30}$ grain of atropia subcutaneously at once, and give an emetic as quickly as possible thereafter; and it seems probable that the action of the emetic may be aided by rolling the patient. If, on the contrary, the sulphate of zinc or mustard is allowed to remain in the stomach for an hour or two, it sets up a degree of irritation, or even inflammation, which requires special treatment for its relief and often lasts for several days.

It would seem, too, that there is no advantage in pushing the atropia until the pupils are widely dilated, but that it is sufficient to give enough to stimulate the nervous centres whence the pneumogastric springs to the degree of action necessary to keep the heart and lungs in motion until the system can rid itself of the poison.

A peculiar feature of this case was the divergence of the optic axes,—a symptom which I do not

* Am. Jour. Med. Sci., p. 282, July, 1869.

† Am. Jour. Med. Sci., p. 282, Jan. 1872.

‡ Am. Jour. Med. Sci., p. 131, Jan. 1873.

remember to have seen noticed elsewhere, but which was probably the cause of the diplopia mentioned in the cases recorded by Dr. Johnson* and Dr. Wood,† as it evidently was in this instance. It is possible that there may have been sufficient tincture of belladonna absorbed by the stomach to act upon the nervous centres in the floor of the fourth ventricle, whence the abducens and vagus take their deep origin, and that all the other muscles of the eye, being temporarily paralyzed by the opium, were powerless to resist the external rectus.

1004 VINE STREET, PHILADELPHIA.

AN ABSCESS IN THE PLACENTA.

BY GERALD D. O'FARRELL, M.D.

A SHORT time ago I was called to see Mrs. R., aged 20, primipara. She informed me that she was in labor, and, as far as she could judge, about her full time. Looking at the woman as she lay in bed, I feared that her fond anticipations were not only destined to be disappointed, but that she was far advanced with some malignant disease. A per vaginam examination, however, showed that she was correct. The abdomen was perfectly flat; the face, neck, and breast, as far as visible, were of that green hue seen in well-marked cases of cancer; her eyes were brilliant; emaciation was extreme, and she complained that her hands and feet were burning.

On inquiring into the history of the case, I learned that, when about six months gone, a boy about fourteen years of age playfully struck her a severe blow on the abdomen. From that time she ceased to grow larger, and the movements of the child ceased also.

On making an examination, I found the os uteri sufficiently dilated to admit two fingers, the edges thin, hot, and wiry. Introducing the fingers into the womb, I could feel the bones of the skull denuded of the scalp, and on withdrawing my hand it was covered with a thin, dark-colored, and exceedingly offensive discharge. After several hours I succeeded in dilating the womb sufficiently to allow the head to pass, but was obliged to make a cone of my hand so as to shield the soft parts from injury. The placenta was delivered shortly after. It was hard, dark, granular, and very heavy, and in the body of it I found an abscess containing about twelve fluidounces of fetid pus. The womb did not seem inclined to contract, nor was there much disposition to hemorrhage. I washed out the vagina with a solution of chlorate of potassa in tepid flaxseed mucilage, and put the patient at once on the free use of liq. ferri iod. and quinia. She made a rapid and perfect recovery, and since enjoys excellent health.

PARACENTESIS IN PERICARDIAL EFFUSION.—Mr. Thomas Barlow reports the case of a child, six years of age, who was brought to University College Hospital with an enlarged abdomen, slight œdema below the eyes, cough, dyspnoea, and emaciation.

There was some bulging in the cardiac region; the apex-beat was absent; the cardiac dulness ex-

tended three-quarters of an inch to the right of the sternum, and a double grating friction-sound was heard from the junction of the xiphoid to the junction of the third costal cartilages. There was also slight œdema of the abdominal walls. A week later, the cardiac dulness reached to within a finger's breadth of the right nipple, and there was fluid in the peritoneal cavity. During two months there was but little change in the physical signs; some increase in the ascites, dyspnoea, and emaciation; the jugulars became distended. There being no reason to expect that anything would cause the absorption of the fluid, paracentesis of the pericardium was determined upon. The skin was punctured by the smallest aspirator trocar one inch below and three-quarters of an inch inside the left nipple. The trocar was pushed upward and outward and entered the pericardium above the fourth rib; three and three-fourths ounces of tinted, brownish, highly albuminous fluid were withdrawn. The pulse was unaffected, and there were no signs of collapse. The patient's condition was much improved for two or three days, but in a week it became necessary to repeat the operation. The trocar was introduced on this occasion at the upper border of the fifth rib, and six ounces of fluid were removed. His symptoms were again relieved for a short time, but in two days the cardiac dulness was as great as before. The abdomen became enormously distended, so that paracentesis abdominis was rendered necessary, and was once repeated. The general œdema increased immensely, and the boy died seven months after the commencement of his illness.

At a post-mortem examination there were found extensive tubercular peritonitis, a deposit of tubercle in the right lung, and a partly adherent, partly nutmeg liver. The visceral and parietal pericardium was greatly thickened, but the two surfaces were not at all united, the heart hanging free in its thickened envelope. *The Practitioner*, October, 1873.

RUPTURE OF THE HEART (*British Medical Journal*, October 18, 1873).—Mr. T. M. Wills reports the case of a man, 45 years of age, who was knocked down by a cart and was brought to the hospital in a state of collapse. A contused wound, about three inches in diameter, was found on his chest a little to the left of the sternum, and corresponding to the fifth rib, which was fractured. The pulse- and apex-beats were imperceptible, the surface cold and clammy, lips and hands blanched, respiration troubled and heaving, and there was slight hæmoptysis. In spite of internal and external stimulation, he grew worse, and died in eight hours after the injury. At the post-mortem examination the pericardium was found distended with clotted blood, and a careful examination disclosed at the apex of the left auricular appendix a small laceration, partly filled with a clot, which freely admitted the introduction of a blow-pipe to the cavity of the auricle. The walls of the auricular appendix seemed unusually thin, and there was a large deposit of fat on the walls of the heart, which in other respects was normal. The pericardium was not torn by the rib, and the point of injury was far behind the seat of fracture, so that the rupture must have been caused by the violence of the contusion. The fact of the laceration being remote from the main current of blood, the force of which was diminished by the orifice of the auricular appendix, and also by the shock, explains the survival of the man for so long a period after this accident.

DETECTION OF WATER IN ETHEREAL OILS.—Oils distilled with water from plants contain water, although they may appear perfectly clear. On mixing such oils with an excess of so-called benzine, a cloudy effect is produced by the precipitated drops of water.—*American Chemist*.

* Medical Times and Gazette, Feb. 15, 1873.

† Am. Jour. Med. Sci., April, 1873, p. 342.

PHILADELPHIA
MEDICAL TIMES.

A WEEKLY JOURNAL OF
MEDICAL AND SURGICAL SCIENCE.

The Philadelphia Medical Times is an independent journal, devoted to no ends or interests whatever but those common to all who cultivate the science of medicine. Its columns are open to all those who wish to express their views on any subject coming within its legitimate sphere.

We invite contributions, reports of cases, notes and queries, medical news, and whatever may tend to increase the value of our pages.

All communications must bear the name of the sender (whether the name is to be published or not), and should be addressed to Editor Philadelphia Medical Times, care of the Publishers.

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EDITORIAL.

ATROPIA IN OPIUM-POISONING.

IT is certainly, under most circumstances, an exhibition of bad taste for an editor to laud or to criticise papers appearing in the columns of his own journal. With the permission, however, of Dr. Schell, we propose to offer some remarks upon the subject concerning which his article in this week's issue treats, because it is one of considerable practical importance, and because his case seems to us to fulfil very beautifully the theory first propounded—so far as we know—in the *American Journal of the Medical Sciences* for January, 1872, in regard to the therapeutic action of atropia in opium-poisoning. As most of our readers no doubt know, that theory is that the great value of atropia in opium-poisoning is as a respiratory stimulant,—that just as when, in a case of opium-poisoning, the circulation fails, alcohol in some form is indicated as a cardiac and arterial stimulant, so in similar cases when death is threatened through disturbance of the respiration, atropia should be given.

The first question that naturally arises at this point is, What proof is there that atropia is really a respiratory stimulant? The proof rests partly upon clinical, partly upon experimental, evidence. It is an undeniable fact that in full doses, both in man and animals, belladonna and its alkaloid alike increase the frequency of the respiration; and it has been abundantly proven by experiment that this is by a direct action upon the medulla, since it occurs in animals whose pneumogastriacs have been

previously cut (Bezold und Bloebaum, *Untersuchungen aus dem Laboratorium zu Würzburg*, erster Theil, s. 59). The action of therapeutic and of toxic doses of atropia is somewhat different, since, apparently, the former do and the latter do not paralyze the pneumonic vagi. At least it has been found that whilst after a full dose of the drug the usual results follow section of the par vagum, after a toxic amount the respiratory rhythm is unaltered by the procedure. Perhaps, however, our deduction is too great for the facts in this case.

Death from atropia is very often owing to asphyxia: possibly this is in a measure due to the nerve-centres being overpowered by the stimulus; but another factor certainly enters into the problem, for it has been proven that, like woorari, atropia paralyzes the motor-nerve trunks. Be these things as they may, one evident deduction can be drawn from all the facts,—namely, that in full non-lethal doses atropia is a respiratory stimulant.

It is scarcely necessary to point out that in opium-poisoning the failure of the heart is very generally secondary to failure of respiration.

In the case reported by Dr. Schell, the effect of the drug was very remarkable, in causing a resumption of respiration after it had for twenty minutes failed to occur, notwithstanding the vigorous employment of the usual methods of restoring it.

Whilst we commend the judicious moderation with which the atropia was employed in the present instance, we cannot help believing that often a good deal of firmness is required in these cases not to use it too freely, especially since reliance is generally placed upon the pupils as a guide. They are, however, a very unsafe guide, as is apparent when it is remembered that whilst opium contracts them by influencing the nerve-centres, atropia probably dilates them by acting on the peripheral nerves.

In regard to the guide as to the use of the counter-poison, judgment, we think, should be formed from a bird's-eye view of the whole case, fresh atropia not being given so long as the respiration and other symptoms are undergoing amelioration, but the dose being renewed so soon as any tendency to a relapse is manifested. Thus, if under the influence of atropia in a case the respirations had risen from four to eight per minute, we would not use the counter-poison again until there was manifested a tendency for the respirations to grow less frequent, or unless for a long period there had been no improvement.

Space is of course wanting here to enter into an elaborate discussion of the subject; but it has been proven by the researches of numerous observers

that the sole action of atropia upon the peripheral cardiac par vagum, and with scarcely a doubt upon the whole peripheral par vagum, is that of a paralyzant. The rise in the rapidity of the heart's action in belladonna-poisoning is very largely due to the removal of the inhibitory power. The explanation we would give of the vomiting which occurred after the injections is, therefore, different from that offered by the reporter. It seems to us that the double nature of the profound opium-narcosis has not had sufficient stress laid upon it. We have not rarely seen a child whose lungs were filled up with the exudation of capillary bronchitis offer symptoms exactly similar to those of the advanced stages of opium-poisoning,—the general relaxation, the profound insensibility, the contracted pupils, the slow, distant efforts at breathing, being all present,—and we have seen the same child under the influence of alternate ice-cold and hot douches commence to breathe; and, as the breathing returned, have watched the pupils dilate, the cyanotic hue pass from the face, and the child arouse itself out of its unconsciousness, only to relapse when the breathing was allowed to fall back. We have treated such a case almost as one of opium-poisoning, and, after four, six, or eight hours, have seen assurances of returning life,—assurances ending in recovery, when for hours the child had been unable to swallow, and the case abandoned by the most skilful physicians as hopeless.

What is the cause of the narcosis in these cases? Evidently, carbonic acid gradually accumulated in the blood through the failing respiration. Precisely the same thing happens in opium-poisoning,—failing respiration, accumulation of the gas in the blood, a double narcosis, due perhaps even to a greater degree to the carbonic acid than to opium. Carbonic acid narcosis suspends reflex actions; we have experimentally corroborated this well-known fact: hence the emetic will not act in a case like that of Dr. Schell's. When, however, the respiration begins to return, when a portion of the carbonic acid has been removed, the emetic is able, as it were, to pierce through the thinned stratum of narcotics and to reach the living nerve below.

IF the telegraphic dispatches be true, a most extraordinary instance of professional pride has just been given in Boston. Recently we chronicled the self-immolation of Obermeier, a young Berlin physician, upon the altar of science; but this time it is simply personal and professional pride that has brought about the tragic result, unless—as seems to us probable—there were some deeper, hidden

springs of action. The story is that in the Boston City Hospital a young female nurse, named Pfyffer, on Tuesday, November 18, took opium with suicidal intent. Dr. Arthur L. Foster, the house physician, was called to her in the night, and mistook her symptoms for hysteria, prescribed, and returned to his bed. The next morning, on finding that his patient was dead of opium-poisoning, he went to the bath-room, and, locking the door, opened a femoral artery.

CORRESPONDENCE.

LONDON LETTER.

[From Our Own Correspondent.]

Mr. Erichsen's Address at University College—Hospitalism—Mr. Callender's Papers on the Subject—A Doctors' War—Death of Dr. Murray—Breach of Professional Rules—Death of Sir Henry Holland.

LONDON, November 5, 1873.

AMONG the most important of the Introductory Addresses at the Medical Schools in London, this season, was that of Mr. Erichsen, the well-known author of "The Principles of Surgery." It was delivered at University College under peculiar circumstances. The physician to whose turn it fell (for it is a matter of rotation) to deliver the address was Dr. Roberts, a young assistant-physician of great promise, and also the venturous author of a New Handbook of Medicine just issued from the press and not yet reviewed. Dr. Roberts, however, fell into bad health; and Mr. Erichsen, who has just recovered from a serious illness, due, it was thought, to "chronic blood-poisoning," had probably most of the materials for an oration at hand,—those, namely, which he had prepared for the Address in Surgery which he was early in the year appointed to give for the British Medical Association. Mr. Erichsen's address was, accordingly, out of the class of ordinary inaugural addresses. It bore the marks of much thought and preparation and treated seriously an important subject, and was in truth a sort of review of the progress of surgery and a survey of its prospects.

It has produced a very serious impression, owing to the way in which it dealt with the subject, and is likely to be the signal for reopening vigorously the great question,—deeply interesting to surgeons and to the world at large,—How far is the influence of *hospitals* injurious to patients undergoing operation in them? What is the rightful meaning of the word *hospitalism*, to which the late Sir James Y. Simpson attached a sinister significance? How far is the alleged baneful influence of hospitals an essential condition of residence in hospitals, and by what precautions can it be diminished?

Mr. Erichsen's statements were slashing, and they have not passed uncontradicted. I believe that your continent is capable of contributing perhaps more important evidence in the discussion of the question than even our European hospitals and private records can furnish, and I am sure that such contribution will be

received with great satisfaction. It is a question equally momentous on both sides of the Atlantic; and therefore I call the particular attention of American surgeons to it. The creed of Mr. Erichsen is stated so broadly and clearly that I shall do best to quote the passage in which he re-states and endorses Simpson's figures:

"Without going into details, which would here be alike unnecessary and tedious, it may be stated broadly that, having collected a large and nearly equal mass of statistical returns of consecutive operations performed in large and in small hospitals, in country, mining, and private practice, he found that of 2089 cases of amputations in large hospitals in this country, 855, or 1 in 2.4, had died; whilst of 2068 in country and private practice the deaths were only 226, or at the rate of 1 in 9.2.

"It is quite possible that Simpson's figures may not be absolutely, but only approximately, correct, and that certain sources of fallacy have introduced themselves into his tables. But, making all reasonable allowance for every possible source of error, the difference is so great between the operation of amputation in and out of hospital that the material result cannot be affected,—viz., that a mortality of 1 in 2.4, or, in other words, of more than 40 per cent., is not a necessary result of amputations; that it is greatly the result of the circumstances in which the patient is placed after the operation; and that it may be materially reduced,—according to Simpson, by nearly three-fourths,—so as to amount to less than 12 per cent., by an alteration of these circumstances; and that the mortality so dependent on circumstances which admit of alteration, of modification, and probably of rectification, is certainly equal to that which exceeds 1 in 9, or 12 per cent.

"But, when we come to analyze these results more closely, some startling facts are elicited. Thus, amputation through the forearm cannot surgically be considered a very serious operation. It is not likely to prove fatal by any conditions dependent on or inherent in it,—as, for instance, by shock or hemorrhage,—but can only become fatal by the intrusion of other and adventitious circumstances dependent on causes existing outside the operation itself. Well, what is the result? That of 377 cases occurring in private and country practice only 2 died, whilst of 244 in hospitals no less than 40 died, being 1 in 188 against 1 in 6.

"Surely here is a condition of things most unsatisfactory in itself, and not very creditable to modern surgery, and one in which we may hope that the further cultivation of the science may do much to aid the progress of the art of surgery."

Accepting thus sincerely Simpson's figures as unimpeachable, it is not surprising that Mr. Erichsen should ask, "Must hospital surgeons ever remain content in losing from one-third to one-half of all their amputations, and nine-tenths of some?" or that, addressing the students, he should say to them, "Here, then, is a vast and most fertile field, to which you who are commencing your studies may direct your attention with the greatest advantage, and which you who after this session will go forth into the world to practise may cul-

tivate with a double advantage, to humanity and to yourselves."

It happens, however, that some others than students just commencing their studies have been directing their attention to this most fertile field, and have endeavored to ascertain what the utmost care and a judicious and minute attention to the recognized rules of surgery can do to reduce hospital mortality after operations to a par with anything that can be claimed for domiciliary surgery. Prominent among these has been Mr. George Callender, F.R.S., one of the surgeons to St. Bartholomew's Hospital, who has succeeded to the charge of Sir James Paget's wards in that ancient and noble institution. Mr. Callender read a paper making known his results at the last meeting of the British Medical Association, London, August, 1873. In this paper he gave a table showing the results of the treatment of compound fractures and of amputations during the last four and a half years, the whole period of his surgeoncy. The table is a very remarkable one: it reads thus:

	TOTALS.	DIED.	RECOVERED.	FATAL CASES.
Operations (excluding those for hernia)	199	6	193	
Compound fractures	28	0	28	1. Ovariectomy.
Amputation at the thigh	14	0	14	2. Ovariectomy.
" " leg	14	0	14	3. Nephrotomy.
" " arm	2	0	2	4. Lithotomy.
" " forearm	3	0	3	5. Syphilitic laryngitis.
	33	0	33	6. Cystic tumor.

Thus it will be seen that there has been in these wards during four and a half years a death-rate after all operations (excluding hernia) of but three per cent., and that of the thirty-three cases of amputation, including fourteen of the thigh and fourteen of the leg, all have recovered. The twenty-eight cases of compound fracture have likewise all recovered; and this explains the absence of cases of primary amputation in the list. It may be doubted whether the results of any surgeon in private practice ever exceeded this; and hence some lectures which Mr. Callender is now publishing in the journal of the Association (*British Medical Journal*), explaining all the details of his treatment, are attracting great attention. They, however, contain little that is new in principle,—indeed, they do not profess to do so,—but they are highly interesting, as showing how important is the attention to small things, and how greatly results are influenced by the most conscientious devotion to details. Rest, isolation, scrupulous cleanliness, antiseptic applications (without the exclusion of air), and a minute and intelligent supervision of everything which can avoid septic poisoning of the wound and improve the patient's condition,—these are the secrets of Mr. Callender's success. I should say that Mr. Callender is a man remarkable for scrupulous exactness in word and act; he is as conscientious in what he says as in what he does; and, besides the fact that all his cases are controlled by public record in the books and papers of the hospital, there is no one here who hesitates to accord the most implicit reliance to his statements, as being sure to be entirely free from every conscious exaggeration, and certainly from every kind of statistical

juggle. The whole question of hospital mortality is likely, therefore, now to be transferred from the region of paper statistics, in which it has rested for a long time, to its proper field, that of actual clinical experiment in the wards of great hospitals. I shall have again to return to this subject (which I do not doubt that you will agree with me in thinking of deep interest); for Professor Erichsen and Dr. Lauchlan Aitken (who assisted the late Sir James Y. Simpson in preparing his statistics) are likely to take the field again shortly on his side of the question, while the series of lectures which Mr. Callender has now commenced will give a minute review of his methods and results, and of those of his colleague at the hospital, Mr. Morrant Baker, which have been hardly less interesting and successful.

The Societies have recommenced, but as yet without any promise of papers of more than ordinary interest. The next meeting of the Clinical Society will, however, produce two interesting papers by Sir William Gull, which may be worth discussion. The most ordinary topics of interest are the preparations for the Ashantee expedition, which is to be a doctors' and an engineers' war chiefly. A few years ago "a doctors' war" would have been a phrase not easily understood by the million. Now, however, it is beginning to be pretty well understood that in a tropical campaign "the wise physician skilled our wounds to heal" (and to prevent) is sometimes "more than armies to the public weal."

A very general and most unusually earnest and outspoken feeling of grief has been caused by the almost sudden death of Dr. John Murray, who, though under thirty years of age, was well known as sub-editor of a medical paper, and was already physician to two leading hospitals. He was carried off suddenly by an attack of erysipelatous inflammation of the fauces, followed by rapid œdema of the larynx. His remains were removed to Aberdeen, his place of birth: they were met at the railway-station by upwards of four hundred of the best-known London practitioners, and a funeral service was there conducted of singular solemnity and strangely sad impressiveness. A tablet and bust will be erected to his memory. Some excellent Latin and Greek lines have been published *in memoriam*. As classical tributes of the kind to the memory of physicians are becoming unfortunately rare, and as both are from the pens of London medical men, I will quote the Greek, which is much admired for its point and classic neatness of diction:

Τί τοῦτο, Θάνατε ; Μὴν ἀφάρπασαι δοκεῖς
Ἰατρὸν ὃδ' ἀνέβου, ὡς τέχνης φθονὸν ;
Οὐκ ἔστι· καὶ γὰρ ἐγγεγραμμένος φρεσὶν
Φίλων, πενήτων, πάντος ἱατρῶν γένους,
Ἄπῳ παρέστι, καὶ σὲ νικήσει θανόν.

"And didst thou think, O death, to gain
A victory by having slain
Him so young, so full of skill?
Ah, no! for he is living still.
He lives enshrined in many a heart,
Friends, brothers, debtors to his art.
Thus, though absent, present, he
In dying, death, shall conquer thee."

From a physician much honored I must pass to one who has incurred professional censure. A well-known physician of St. Thomas's Hospital, greatly to the surprise of his professional brethren, lately undertook to edit a column, entitled "Our Medical Column," in a weekly paper called "The English Mechanic." This is entirely contrary to obvious rules of professional ethics. He defended himself vigorously and defiantly when called to account by the medical papers, and alleged—no doubt truly—purely philanthropical motives. But, whatever the motive, the course was obviously wrong; and, after a very brief struggle, he has succumbed, not without some loss of consideration among his professional brethren here, who do not easily pardon such a breach of professional rule. The struggle was so brief that the College of Physicians and the staff of his hospital have been relieved from the necessity of interfering.

The death is announced to-day of Sir Henry Holland, a physician who has occupied the highest social position for many years, and who was of great literary and scientific distinction, but who was not very well known personally in medical circles, from which he held himself unduly aloof. He died at the age of eighty-five, quietly in his bed, after a very few hours of languor, having recently returned from one of those long vacation-rambles far afield (this time to the fair at Nijni Novgorod in Russia) in which he had annually indulged throughout his long and active life. He was a frequent visitor to America, and the friend of many distinguished American citizens,—among others, the personal friend of six Presidents of the United States. His first wife was a daughter of the late Canon Sydney Smith.

PHILADELPHIA, Nov. 20, 1873.

TO THE EDITOR OF THE PHILADELPHIA MEDICAL TIMES.

DEAR SIR:—I send the following clipping from the *Public Ledger*. What chance have the hospital doctors against an accoucheur with a baby of seventeen and three-quarters pounds weight?

"A BOUNCING BOY BABY.—Mr. John Brooks, 1728 Warnock Street, has been furnished by the attending physician, Dr. Prall, with the following particulars concerning his new-born son, Henry C. Brooks, born on Tuesday last, November 18:

Weight	17½ pounds.
Length	22½ inches.
Measure around the shoulders	19½ "
Measure around the waist	17½ "
Measure around the chest	17¼ "
Measure around the head	16 "

"Perhaps some of our experienced doctors, or affectionate mothers, may be able to present cases approaching the dimensions of this young gentleman on his birthday: if so, the *Ledger* will help to make an enduring record of the fact."

Yours,

CONTRIBUTOR.

PROCEEDINGS OF SOCIETIES.

MEDICAL SOCIETY OF THE COUNTY OF ALBANY, NEW YORK.

ANNUAL MEETING, NOVEMBER 11, 1873.

Reported by JAMES S. BAILEY, M.D.

DR. ALBERT VAN DERVEER, PRESIDENT, in the chair.

THE Society was called to order at 3.15 P.M.

The minutes of the last semi-annual meeting were read and approved.

A communication from the State Medical Society was presented and read by the Secretary, and was received and accepted.

The President announced that the committee would be appointed at a future time.

The report of the Treasurer was then read by the Treasurer, Dr. W. H. Murray, and was received and adopted.

The report of the committee on publications was then read, and, after a lively debate, was laid on the table.

Drs. Segur, P. A. Fennelly, and O. H. E. Clarke were elected as members of the Society.

After various miscellaneous business, the President delivered an admirable address, and the following were elected officers for the ensuing year:

President—John Swinburne.*Vice-President*—H. W. Steenburgh.*Secretary*—F. C. Curtis.*Treasurer*—W. H. T. Reynolds.

The remainder of the officers continue the same as last year.

The Society then partook of a banquet, with the usual accompaniments of toasts, speeches, etc.

GLEANINGS FROM OUR EXCHANGES.

FALLACIES AND FAILURES IN ANTISEPTIC SURGERY (*British Medical Journal*, October 18, 1873).—Mr. Edward Lund, surgeon to the Manchester Royal Infirmary, and one of the advocates of the antiseptic system, enumerates a few of the erroneous notions which are entertained on this subject. He says:

"1. It is a fallacy, or an erroneous doctrine, in the practice of antisepticity, to think that it is the agent employed, and not the result produced, which must be watched. Carbolic acid is only useful by preventing putrefaction in the excreta of the wound, and to say that it has any special power beyond is a mistake.

"2. It is a fallacy to assume that the success or failure of the system is to be measured alone by the absence or presence of suppuration.

"3. It is a fallacy to look upon the secretion and expulsion of pus as so much broken-down tissue, produced by the removal of previous induration, the reduction of swelling, and the clearance of the general system of some peccant matters.

"4. It is a fallacy to regard the admission of air to wounded portions of the body as a matter of light importance, unless the air be filtered and disinfected of its septic particles.

"5. It is a fallacy to ignore the possible contagion of septic matters from one wound to another, from one person to another, from tainted instruments and soiled dressings, and thus to neglect the most scrupulous cleanliness in the treatment of wounds, by quick removal, from within their range, of the minutest portions of the products of putrefaction.

"6. It is as fallacious as it is inconsistent to attribute on the one hand to atmospheric causes the presence of pyæmia, septicæmia, erysipelas, and the like, and yet to take no precautionary measures which can be proved to be efficient to neutralize these ill effects in the treatment of wounds."

In regard to the sources or causes of failure which may vitiate the ultimate results of any operation conducted on antiseptic principles, there may be mentioned:

"1. Non-attention to the needful preparations before the operation is commenced, in reference to the part to be operated upon, the instruments to be used, and the assistants who are to take part in it. This applies as much to the treatment of abscesses as of wounds properly so called, for the entrance to the abscess must be most carefully guarded at the time of incision.

"2. Defective arrangements during the progress of the operation, from its commencement to its entire completion.

"3. Faulty adjustment of the dressings after the operation is finished, such as allowing them to pucker up and thereby leave channels or cavities so capacious that more air collects in them than the vapor generated from the resin cloth or gauze can disinfest.

"4. Injurious delay in redressing the wound for the first time after the operation, so that the discharges, having exuded through the layers of whatever antiseptic material may be employed, reach the air, become putrid, and have their septic influence carried backward to the wound.

"5. Carelessness in the special method of removing the old dressings and applying new ones, even where the atmosphere is assumed to be rendered innocuous by antiseptic vapor.

"6. Needless alarm at certain complications which may arise, and, being regarded as harbingers of evil, cause the neglect or total abandonment of the system. The most common of these complications is the sudden appearance of redness in the skin near the wound, seeming to forebode the advent of erysipelas. It rarely goes beyond the condition of severe erythema."

GUNSHOT WOUND OF THE HEAD (*St. Louis Medical and Surgical Journal*, November, 1873).—Dr. T. F. Prewitt reports the case of a man, æt. 32, who, while endeavoring to shoot himself, inflicted a wound a little to the left of the median line of the forehead and about an inch and a half above the supraorbital ridge. The bullet entered the cranium, and the bony circumference of its track through the skull could be traced with a probe for several inches. The man suffered somewhat from irritability of the stomach, nausea, and vomiting, but this condition was relieved by chloral and morphia. He was kept quiet, and in five weeks was discharged from the hospital greatly improved. About a year afterwards he came under observation again, complaining of great headache, involuntary discharges of urine, and general malaise. He sank gradually, became semi-comatose, and finally died of asthenia.

On the post-mortem examination the bullet was found encysted and lying near the anterior border of the left lobe of the cerebrum, upon the under surface of which was a large sac filled with pus. There were evidences of inflammation of the brain and dura mater in the neighborhood of the ball.

TRAUMATIC TETANUS SUCCESSFULLY TREATED WITH CALABAR BEAN (*Chicago Medical Journal*, November, 1873).—Dr. J. A. Duncan resorted to calabar bean in a severe case of traumatic tetanus, after enormous doses of opium, chloral, ether, belladonna, and bromide of potassium had been given without benefit. A tincture of the bean was used containing one grain of the powdered drug to four minims of the menstruum. Fourteen

drops were given at once, and subsequently nine drops every two hours. In four hours a troublesome spasmodic contraction of the neck of the bladder was overcome, a quart of urine was passed voluntarily, and the pulse fell from 104 to 80. His general condition, however, remained about the same. The remedy was continued in large doses (eight drops every three hours) for fifteen days, when, as there was not much change for the better, fifteen drops were given every three hours for the entire day. The following day—the twentieth of the disease—the patient was able to leave his bed, ate with great appetite, and from that time progressed steadily to complete recovery.

TINCTURE OF DIGITALIS AND CHLORAL HYDRATE IN DELIRIUM TREMENS (*Boston Medical and Surgical Journal*, October 16, 1873).—Dr. E. Chenery records the case of a Scotchman, aged 35, who, when first seen, had neither taken food nor slept for nearly a week, during which time he had been on a continuous debauch. His mind was greatly agitated, his muscular system in a state of unrest, and his pulse feeble and frequent. A strong mustard plaster was applied to the pit of his stomach, fifteen grains of chloral were given, and in twenty minutes twenty drops of the tincture of digitalis. These were retained, and in ten minutes thirty grains of chloral were administered, and were followed by three hours of refreshing sleep. A raw egg and some milk were then given, with another portion of digitalis, and in a short time thirty grains more of chloral. This time he passed off into a sleep of many hours, from which he awoke much relieved. Small doses of digitalis were continued for several days, partly to reduce the pulse, but principally for the sake of the eliminative action on the kidneys.

POISONING BY RED PRECIPITATE (*Irish Hospital Gazette*, October 15, 1873).—Mr. Russell reports the case of a girl, æt. 15, who by mistake took half an ounce of red precipitate. She was admitted to the hospital a few minutes afterwards, having no urgent symptoms whatever. An emetic of sulphate of zinc was administered, and abundance of milk was ordered as diet. The following day her lips, gums, and mouth were very sore, swollen, and reddened, she had a distinct mercurial fœtor from her breath, with headache, and pain in the epigastrium. She was ordered thirty minims of Battley's sedative liquor, an alum gargle for her mouth, and poultices to the epigastrium. She began to improve immediately, her bowels were gently moved by a dose of castor oil, and she had no further trouble from the effects of the drug, except that in about a week she lost two front teeth, and her mouth remained slightly sore for a few days longer.

INFANTICIDE (*The Lancet*, October 11, 1873).—Dr. W. Handsel Griffiths calls attention to the fact that a sharp instrument, such as a needle or bodkin, can be thrust up under the upper eyelid of an infant, made to pierce the orbital plate of the frontal bone, enter the brain, and cause death with no other symptom than a convulsion, and not only leaving no external mark whatever, but causing neither a fracture of the bone nor the escape of a single drop of blood. In experiments on animals Dr. Griffiths has found the utmost difficulty in detecting the wound on making a post-mortem examination; and he suggests that in cases of sudden death of infants from "convulsions" it is the duty of the medical man to make an autopsy as soon as possible, and investigate minutely the state of the orbital walls.

WOUND OF THE ABDOMEN (*British Medical Journal*, October 11, 1873).—Mr. W. Nettle reports the case of a boy, aged 16, who while climbing over a gate slipped and fell on one of the iron spikes with which its top was covered. He at first felt sick and faint, but soon

recovered, and walked home, and did not discover, until undressing for the night, that he was wounded. There was in the left inguinal region an opening about an inch in length, through which protruded a tightly-constricted piece of omentum. This was replaced, the wound closed by sutures, and the boy sent to bed, which he left in a fortnight perfectly well.

EFFECTS OF PRESSURE ON THE FŒTAL HEAD (*British Medical Journal*, October 18, 1873).—Dr. J. Matthews Duncan reports a case in which a persistent digital impression was produced on the parietal bone of a fœtus during birth by the finger of the accoucheur, who was endeavoring to effect artificial rotation. The result was slight, short, but frequently repeated, epileptiform seizures, which lasted some time after the digital impression had disappeared, and which were finally replaced by choreic movements.

THE MEDICAL VALUE OF ARTERIAL PRESSURE.—In experimenting with the sphygmograph, some years ago, Mr. Edward De Morgan made the following deductions, which, with their practical application, he now makes public. When pressure is applied to both axillary and femoral arteries, about half the blood in the systemic or greater circulation is withheld. The remainder returns to fill the left ventricle of the heart, which either contracts upon half its normal amount of blood or delays its systole until sufficient blood has returned from the unobstructed vessels to distend it to its normal contracting volume. In the latter event the pulse would be diminished in frequency and increased in fullness: the sphygmograph, however, shows that this is not the case when the arteries are compressed. Hence it follows that the left ventricle contracts upon half its normal quantity of blood, that the right ventricle does likewise, and that, the area of the pulmonary or lesser circulation being undiminished, the pulmonary artery contains but half its proper amount of blood, which must therefore speed through it less rapidly and with diminished pressure upon its walls.

Mr. De Morgan determined to apply this theory in the hæmoptysis of consumptive cases, in traumatic pulmonary hemorrhage, as a direct *dry cupping* of the lung in inflammatory diseases, and, on the supposition that damming back venous blood from the lungs would diminish the necessity of oxygenation, in spasmodic asthma and cardiac and emphysematous dyspnœa. He briefly records the results of a few cases in which he obtained great success by this plan of treatment. In a patient with a bullet-wound of the left lung, and with great pneumothorax and hæmothorax, axillary pressure gave immediate relief to the dyspnœa. In a young lady with spasmodic asthma the paroxysm was cut short by the application of the thumbs to the axillary arteries; and the same means instantly relieved the suffocative distress of an old gentleman with chronic bronchitis and emphysema. Mr. De Morgan has found that cardiac dyspnœa is not benefited in nearly the same degree as that of pulmonary origin, but that in the latter relief is immediate and unailing.—*The Lancet*, September 20, 1873.

PROFESSOR BETZ'S METHOD OF MAKING SECTIONS OF NERVOUS TISSUE (by Dr. Batty Tuke).—Professor Betz, of Kiew, has lately produced brain-sections which have attracted very considerable attention in Vienna. His specimens are of vast extent. He appears to be able to produce thin sections of an entire hemisphere. We append his method of hardening and cutting as it is stated in the "Correspondenz Blatt der deutschen Gesellschaft für Psychiatrie und gerichtlich Psychologie," January, 1873. The method of hardening which we wish to bring into notice is as follows,—observing that differences exist in the treatment of the spinal cord,

cerebrum, and cerebellum. The spinal cord, after the careful removal of the dura mater, is placed in spirit of from seventy-five to eighty per cent., which is tinged a clear brown color by the addition of iodine. After from one to three days, during which the preparation must stand in a cool temperature, the pia mater and the arachnoid are also removed, the specimen remaining in the spirit, to which a few drops of iodine must be added daily for three days, maintaining an ordinary temperature. It is then transferred to a three per cent. solution of chromate of potass, and back again to the cool temperature. Here it hardens thoroughly, which is known by the fluid becoming turbid, and by the formation of a brown deposit upon the preparation. When this occurs it must be immediately thoroughly washed with water, and immersed in a solution of chromate of potass, from a half to one per cent. strength, in which it will not become too hard or brittle.

Preparations of cerebellum can only be made when it has been taken from a perfectly fresh body. Before immersing it in the iodine spirit, the vessels and membranes must be carefully removed, especially at the vermiform process and the "square lobes;" and cotton wool should be stuffed into the sulci on either side of the process, the rhomboidal groove, and the nates and testes, should they be in the specimen, so as to render the passage of fluid into the deeper parts more easy. The preparations should rest on cotton wool. The iodine spirit should be quickly increased in strength. After from seven to fourteen days the specimen should be placed, provided it does not give to the finger, in a five per cent. solution of chromate of potass.

The *great brain*, after being divided in half through the length of the corpus callosum, is laid in weak iodine spirit. After some hours the separation of the membranes in the fissure of Sylvius, and at the tail of the corpus callosum, should be commenced, so as to allow of the permeation of the spirit. The preparation must stand in a cool place (during summer in an ice-cellar). After from ten to fourteen days it is removed to a four per cent. solution of chromate of potass. When sections are to be taken, it must be washed carefully in water.

The Cutting of Sections.—Betz endeavors to avoid all rubbing of the knife on the surface of the preparation, and sticking of the section on the upper surface of the blade. To this end he has had constructed a knife whose upper surface is convex, the under one concave, the radius of the lower one being somewhat smaller than that of the upper. The blade is from one and a half to twice as long as it is broad, the thickness being one-third of the breadth. For large cross-sections, as for instance through the whole hemisphere, Betz uses a knife whose blade is twenty-one centimetres (eight and a quarter inches) long by ten centimetres (four inches) broad. This form of knife (hatchet?) makes it possible to keep the surface of the preparation and the section constantly wet by means of dropping spirit, so that rubbing on the one and sticking of the other may be avoided.

Details are given of the form of section-machine, which, except of course in size, is constructed on the same principle as the one in use in this country.—*London Journal of Mental Science.*

CHLORAL IN NOCTURNAL INCONTINENCE OF URINE.
—Dr. William Thompson gives the following directions for the employment of chloral in nocturnal incontinence.
1. Only give it at night, the patient having fasted for two hours before going to bed. 2. Give it in full doses and when in bed. 3. Let the patient have as little fluids as possible; beer and spirits to be positively prohibited. 4. Not to be continued longer than a week or ten days: if benefit is not derived within that period, the case is either not one of incontinence depending

on habit solely, or the peculiar idiosyncrasy of the patient prevents the beneficial action of the chloral.—*The Lancet*, September 20, 1873.

MAGNESIA AS A SURGICAL DRESSING.—Dr. Ohlmeyer, of Weissenburg, has found the carbonate of magnesia of value,—

1. In atonic ulcers.
2. In cases where the epidermis was eroded and the subjacent tissues were the seat of pain and were prone to subsequent suppuration.
3. In relieving the pain of inflamed wounds.
4. In cases where it was desirable to stimulate the affected surface, prevent the access of air, and limit the formation of pus. He was led in the first instance to try this remedy from its well-known action in those states of the stomach where there is an excessive formation of acids. These latter, uniting with the base magnesia, are neutralized, and carbonic acid evolved. Accordingly, he believes that in exposed surfaces where the process of healing is prevented by fermentative action, this dressing is indicated. The use of it was attended with satisfactory results. The magnesia unites with the acids which form on the surface; it excludes the oxygen, forms an artificial covering, irritates the granulations, and forms a barrier against external and harmful agents.

In preparing the application he selects a fluid that will not readily oxidize. Oil answers this indication, and the kind he employs is the oil of sweet almonds. Adding to this the carbonate, he makes a tolerably fluid paste of salve. This is then spread upon linen and laid over the wound. It is held in place in the ordinary way.

Dr. Ohlmeyer also adds that he has used the carbonate successfully in facial erysipelas, when it was important to protect other patients from infection. In this latter case he used water as a substitute for oil.—*The Clinic*, from *Allg. Med. Central-Zeit.*, xlvii., 1873.

ADMINISTRATION OF PODOPHYLLIN (*British Medical Journal*, October 18, 1873).—A. E. Barret recommends the following formula when it is necessary to give podophyllin:

R Podophyllin, gr. ivss;
Extracti elaterii, gr. ivss;
Pulv. jalapæ comp., ʒvj.—M.

Half a drachm of this powder in half a pint of warm water acts most effectually, the cholagogue effects of the podophyllin seeming to be assisted by the hydragogue. Its use is not apt to be followed by constipation.

MISCELLANY.

A RECENT writer in *The Belgravia*, in an article on toads, says, "Any book of folk-lore will show how much the medicine of the mediæval period dealt with all kinds of reptiles and other such 'uncanny animals' as hedge-hogs, bats, owls, and other weird and darkness-loving things. Serpents, we know, were sacred to Æsculapius, not on account of their supposed wisdom or subtlety, but by reason of their yearly renovation in a change of skin; and it would seem that all the reptiles of the lizard and frog classes, which inherit some share of the enmity sown in Eden between the seed of the woman and the seed of the serpent, inherit also some part of this affinity between snakes and the practice of medicine. I find that the homœopaths of the present day retain at least one drug obtained from

snakehood,—‘lachesis,’—which is said to be the poison of the lance-headed viper, though it may perhaps be doubted whether their chemists have really supplied their vials from the poison-bag of that interesting reptile. They also use the sepia of the cuttle-fish; and I have often been struck by the appropriateness of sepia as a medical emblem. I observe that doctors, when hard pressed in argument, always escape in a flood of hard words, like the cuttle-fish, protected and concealed by the blinding inky trail it leaves behind it.”—*Littell's Living Age*.

PROSTITUTION IN JAPAN.—Japan has many “soiled doves;” and, among the social reforms of last year, it has freed them from the obligation of their contracts, to which in many cases, according to the last consular report, they “had never been willing parties.” The uncaging, however, has been effected without due regard to consequences, and their escape from the brothel-keepers and subsequent flight through the settlements has converted them into “carrier-pigeons” of a very dangerous breed, distributing disease right and left among natives and foreigners. Thanks to Staff-Surgeon Hill, R.N., in charge of the Lock Hospital at Kanagawa, whose post would have declined into a sinecure from the hasty action of the authorities, street-prostitution has been suppressed, and the majority of the women gradually disbanded and sent to their homes either in the neighborhood of Yokohama or at a distance from it. Under the new system, each woman pays a license-fee of three dollars a month to the local government; but Dr. Hill views with regret the action of the authorities in compelling the women to pay their own Lock Hospital expenses. The consul at Kanagawa is in hopes that a portion at least of the revenue thus derived, which is likely to amount to some 30,000 or 40,000 dollars per annum, may be applied to the relief of the unfortunate class.—*The Canadian Medical Times*.

TO COOK RICE.—The following is an account, taken from an old number of the *Gazette des Hôpitaux*, of the method recommended by the French Academy for cooking rice, during the siege of Paris. Take one cup of rice and one-fourth of a cup of water in a saucepan, cover and place over a good fire; after an hour the water will be evaporated, and the rice cooked tender, but dry, and with the grains distinct,—not in a paste. Sufficient salt should be added in the first place, and care should be taken not to disturb the rice whilst cooking.

By adding a little butter, and allowing the rice to dry a little more over a gentle fire, a more delicate dish is prepared.

Rice cooked in this manner, which is the same as that employed in the East Indies, bears the same relation to the indigestible paste of the New England kitchen as does bread to boiled flour.—*Boston Medical and Surgical Journal*.

PREVENTION OF TORMENTING OF HORSES, ETC., BY FLIES.—M. Lochard, a veterinary surgeon, describes a simple and economical means of preventing the suf-

fering which is induced in horses and other animals by the persecution of flies, and which our provincial readers will probably be induced to try. It consists in painting with a pencil the insides of the ears, or other parts liable to be bitten, with a few drops of empyreumatic juniper oil (*huile de cade*). Insects will not approach the parts so painted, and the cost of the oil is trifling.—*The Clinic; from Journal de Connaissance Méd.*

THE SIX FOLLIES OF SCIENCE.—The six follies of science are said to be the following: the quadrature of the circle; the establishment of perpetual motion; the philosopher's stone; the transmutation of metals; divination, or the discovery of secrets by magic; and, lastly, judicial astrology. It is unwise to say that anything is impossible, until the impossibility is demonstrated. It is not at all improbable that the present century may see that one of these so-called follies is a reality.—*Journal of Applied Sciences*.

THE value of roasted coffee as a disinfectant, or rather deodorizer, is well known to housewives. In the London *Lancet* of October 25, Dr. William Story commends it highly as an application to foul ulcers.

NOTES AND QUERIES.

A CORRESPONDENT suggests that there be a department of Notes and Queries in the *Philadelphia Medical Times*. Although somewhat doubtful as to whether there is any demand for such department, *i.e.*, whether sufficient queries will be presented to make it lively, we are willing to try the experiment. We would like to combine with it a department for original tried formula, because no doubt some queries will be in such direction, and would ask our readers to furnish any they may have.

Correspondent.—What is meant by the expression “hydatids with echinococcus,” used in a recent book notice?

Answer.—The expression is somewhat tautological, as all hydatids contain echinococci or their remains. Perfect echinococci, with the sac and hooklets, are often not to be found; and we suppose the expression meant that they were present.

OFFICIAL LIST

OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U.S. ARMY, FROM NOVEMBER 18, 1873, TO NOVEMBER 24, 1873, INCLUSIVE.

ABADIE, E. H., SURGEON.—To report by letter to the Commanding General Military Division of the Atlantic, for assignment to duty. S. O. 230, A. G. O., Nov. 18, 1873.

BILL, J. H., SURGEON.—Granted leave of absence for three months on Surgeon's Certificate of Disability. S. O. 231, A. G. O., November 19, 1873.

ALDEN, C. H., SURGEON.—Assigned to duty at Fort Walla Walla, Wyoming Territory. S. O. 157, Department of the Columbia, November 6, 1873.

WEBSTER, WARREN, SURGEON.—Assigned to duty at Angel Island, California. S. O. 133, Department of California, November 4, 1873.

HUNTINGTON, D. L., ASSISTANT-SURGEON.—Assigned to duty at Fort Stevens, Oregon. S. O. 157, Department of the Columbia, November 6, 1873.

KOEFER, E. H., ASSISTANT-SURGEON.—To report by letter to the Commanding General Military Division of the Atlantic, for assignment to duty. S. O. 230, c. s., A. G. O.

STYER, CHARLES, ASSISTANT-SURGEON.—Granted leave of absence for thirty days, with permission to leave limits of Department and apply at Division Headquarters for an extension of thirty days. S. O. 200, Department of the South, November 19, 1873.

WIGGIN, A. W., ASSISTANT-SURGEON.—Assigned to duty at Fort Vancouver, Wyoming Territory. S. O. 157, Department of the Columbia, November 6, 1873.

PHILADELPHIA MEDICAL TIMES.

SATURDAY, DECEMBER 6, 1873.

ORIGINAL COMMUNICATIONS.

NEUROTOMY.

BY S. WEIR MITCHELL, M.D.

THE state of medical opinion as to the results of nerve-sections has undergone some strange reversals from time to time, until of late, owing chiefly to imperfect observation on the part of certain eminent surgeons, we are told that a large nerve can reunite within a few days after having been divided, and can thus early reassume its lost functions. Upon this point, as has often happened, the physiologists and clinicians were on opposite sides. Nerve-sections in the laboratory, even in young animals, gave no such result as the presence of feeling a few hours after the division of a nerve. It is most interesting to observe what occasioned this conflict of opinion, and to see how both sides were somewhat astray, and how the truth—a most useful and practical one—has at last come out of it.

In 1864, the usual physiological belief was, that a nerve having been cut, some definite region to which it was distributed would lose all sense of feeling, and that certain muscles would act no longer until after many months, when, in fortunate cases, the nerve-ends reunited, and the sensory and motor functions became partially or fully restored. In the same year, 1864, Laugier brought the ends of a cut nerve together by suture, and saw that the parts involved had some feeling and motion *the very same day*. As strange results were obtained by Nélaton and Paget. But soon after Verneuil pointed out that in cases where no reunion could have taken place, where, in fact, a post-mortem section showed absence of union, motion had been seen and sensation noted in the parts concerned: so that some of the cases proved too much. In 1867, Letiévant, after dividing the median nerve in man, satisfied himself that both feeling and motion remained, where, according to the ordinary notions, none should have been found. A careful study, however, showed that each muscle fed by the cut nerve was really palsied, and that the motions seen were due to muscles supplied with nerve-force by the ulnar and radial. As to this there can be no doubt; and my own study of a recent case has on this point satisfied me thoroughly. The seeming presence of feeling was more of a puzzle. It was found that feeling was vastly lessened in the median area, but not lost, except in a very limited space: now, this state of things existed within a few hours after the section, when not even the wildest believer in regeneration of nerve could dream it had already taken place. The explanation in this especial case lies in the existence of branches from the ulnar which enter the median nerve below the point of section, and also in the intimate plexus it forms with other nerves at the finger-ends. The anatomists are, in part, responsible for the clinical difficulty. Take for instance Flower's Atlas, or most of the anatomies,

and you will see that the median innervates this area, and the ulnar that, and so on, while in truth this whole surface-anatomy is a fiction and has to be studied anew by closer dissections and by utilizing such nerve-sections as are made in man. In fact, I believe it will be found that the regions of skin made sensitive by but one nerve-branch are very limited, and that throughout the whole surface, and not merely at the extremities, division of several nerve-stems will be needed to extinguish feeling of all forms in any one part of the skin. Strange, then, as it may seem, there is yet room for a careful monograph on the anastomoses of the main nerves. As regards the hand, some of these are pointed out in certain anatomies, and not in others. In Hilton on "Rest and Pain" there are interesting facts in this direction, and so also in Hirschfeld; while Letiévant has described at least one hitherto unnoticed anastomotic branch between the ulnar and the median. Yet later, Arloing and Tripier have shown that in cats and dogs these communications are so complete that to annihilate feeling in any one part of the paw all its nerves must be cut.

I was amazed of late to see how difficult it is in man utterly to destroy feeling in the arm. In a notable case, Dr. Maury divided the whole brachial plexus in the neck. At first the posterior and inner cords were cut, and the patient was allowed to become free of the effects of ether. To my surprise, he still had touch-sense in the palm and dorsal surface of the hand, forearm, and arm, and on the inner face of the arm. The inner face of the forearm I think I did not examine. As to the rest, I am positive that partial feeling remained until, the external cord being divided, the whole sensibility was lost save at the upper parts of the arm, where there was, and still is, some tactile sense, due, I presume, to filaments given off from the plexus above the point of section. I do not dwell on the case, as it will be more fully related at another time. It went far towards justifying the extreme opinion I have mentioned as that likely to become a future medical belief. I had certainly believed, with others, that in the brachial plexus the interchange of fibres was notable, but I had not supposed it to be so perfect. M. Letiévant* and I myself have pointed out some of the fallacies which arise from want of care in studying the true areas of lost feeling; but it is needless to dwell further on this.

I may add that his views as to surface-anatomy of nerves are well illustrated by cases of my own, and that the lapping over, so to speak, of nerve-territories is to be seen in the face as well as in the extremities. Careful study of his facts, and of one of my own which I am about to publish, has shown that the nerve-distribution in the hand is subject to certain variations, so that sometimes the median, for example, innervates the palmar face of the thumb, the index and half of the second finger, sometimes extends over the whole face of the latter, and very often reaches the line given in Flower's plates, which carry it up to the middle of the face of the

* *Traité des Sections nerveuses*, Paris, 1873.

third finger. Also, in my case it gives scarce any surface-feeling to the palm, while in Letiévant's it largely supplies the palm on one side, according to the commonly received anatomy. Its section also greatly damages feeling on the dorsal aspect of the thumb, the index and second finger, but the area affected is not the same in his cases and in mine. Like variety exists as to the ulnar distributions, and, as I shall show in future, the radial nerve has been cut, and has left in one case so large a degree of feeling on the dorsal face of the hand that neither the patient nor the physician could perceive that there was any loss at all.

It is to be hoped that a few years will give us a large number of careful maps of the regions in which feeling is lost after nerve-sections. If they are made by observers as careful as Letiévant, we shall have, by-and-by, a new and reliable surface-anatomy. It is greatly needed. Nor do we require to know alone the ordinary distributions: we desire also to have sketches of the variations which seem to be frequent, for while as yet nerve-supply to muscles seems to be definite and constant, that to the skin-spaces appears to vary strangely and frequently.

I have said that there was practical value in this knowledge; as thus: a year ago, if a surgeon had been asked to cut a nerve to relieve a local injury on the extremity of the dorsum of the index-finger, he would, without doubt, have cut the radial; and yet, as we now know, the median may have been equally or more to blame. Doubts of like nature would arise if the cause to be quarantined by nerve-section lay in the third finger, because sometimes that part is fed by the median, sometimes by the ulnar, at times by both. In these facts lies, as I believe, the true blame for many of the failures to relieve by nerve-sections epilepsy or tetanus when these are due to an eccentric cause. The knowledge I am seeking becomes, from this point of view, of inestimable value.

I have asked myself again and again how it is possible to know just where a given nerve is distributed,—whether it chances to be normal, or one of those cases of variety which occur so often that we may well call them normal variations. There are, I think, three ways. If we freeze the ulnar, it is not difficult, as a rule, to determine by the lost feeling its area of distribution. The process is very painful, as I know to my cost. Pressure may also be used, and is more generally applicable. We can compress any of the arm-nerves until they lose power to transmit impressions, and then the area of lost feeling may be studied. This also is not a painless process, and it is not always or everywhere of easy application. In my own case I can easily trace out the distributions by passing a faradic or galvanic current through two or three inches of the nerve to be studied. I think the plan will usually answer. It gives very clear replies. Thus, a current of moderate intensity is felt only in the usual ulnar region, *i.e.*, up to the middle of the third finger, but most sharply in the ulnar palm and the little finger; made more severe, it is felt also in the third finger, and even beyond it; but a mild current

surely placed in the ulnar or the median gives clearly a sense of vibratory tingling in certain spaces. As to the interpretation of the results of very severe currents I am not so sure; they seem to affect nearly all of the hand; but as to this I shall probably have more to say in future.

M. Letiévant discusses in his excellent treatise the question of neurotomy for cancer, ulcers, tetanus, neuralgia, and epilepsy, but says no word as to its use in local spasm, as blepharo-spasm, in which I have seen brilliant successes and as remarkable failures. As regards neuralgia, I have had to counsel in favor of neurotomy where the pain had a traumatic cause, but in what I may fairly call a vast experience I have never been driven to cut a nerve for common neuralgias. Anstie does not even discuss the question; and it is to be remembered that galvanism has succeeded after neural section has failed. Yet I should not hesitate to use it, because I believe that even when the cause is of known centric origin there may be good reasons why neurotomy may cure. Indeed, we ought not to fail to remember that galvanism is a peripheral application, and does win successes, even where the malady is surely centric.

As regards the influence of nerve-section on the thermal conditions of a limb, the clinical observers tell us that there is always a fall of temperature, while the physiologists say there is a rise of the thermometer; but the latter observers experimented immediately after section, the others, as a rule, only after weeks or months, so that I felt free to predict that when the clinician would put himself in the same position as the physiologist, nature would make him the same answer; and this is just what my own cases have lately taught me. First, the temperature rises, and then, after a time, it falls. These constant conflicts of opinion always end in this fashion. Somewhere there has been a defect of observation, or else the stand-point whence the facts were seen has been different, and so the facts have been made to seem to vary. The case of neurotomy of the brachial plexus by Sands and Seguin* is, I suspect, the first example of this operation. It is admirably related, with scarcely any defects, which cannot be said of the European cases of neural section. In fact, as I have already said, the horrible confusion as to the results of neurotomy, which has so long embarrassed us, is due to observations so clumsy and imperfect that they cannot be too severely criticised.

KITCHEN MEDICINE.

BY J. SOLIS COHEN, M.D.,

Lecturer on Laryngoscopy and Diseases of the Throat and Chest in Jefferson Medical College.

KITCHEN Medicine is a term which will serve to express what is so significantly styled *Hausmittel* (literally house-means, or home-remedies) by the Germans. The resources of a modern kitchen are so vast that, with due attention to them, at least

* A Case of Traumatic Brachial Neuralgia. New York, Jan. 1873.

in the more ordinary forms of disease, or ailments rather, which form the bulk of a physician's practice, the intelligent practitioner can often practise therapeutics without drugs. It would be impossible to exhaust the subject in the course of a journal article, especially if one permitted himself to dwell upon the collateral subjects that such a theme would naturally suggest; and no attempt to do so will be made on the present occasion. The writer has had it in view for a long time to write a volume, to be entitled *Therapeutics without Drugs*, which should treat in a scientific manner of the remedial agencies of air, water, heat, cold, food, clothing, exercise, rest, *kitchen medicine*, and so on; without reference to a single drug of the hundreds that crowd our *materia medica*, or the slightest resort to a pharmacopœia.

The potent remedial virtues of drugs are by no means to be ignored. Instances are frequent enough in which it is impossible to treat disease without their aid. Still, it is well now and then to have our attention directed to agents which are apt to be overlooked because they are so familiar, and undervalued because they are easy of access.

If we take a cursory glance at some of the familiar articles to be seen in the kitchen, and reflect upon a few of the therapeutic uses to which they may be applied; if we reflect upon the nature of the physiological effects which it is the object of therapeutic agents to promote, and look in the kitchen for means to accomplish them; or if we run over in the mind a list of the most frequent ailments to which the human body is subject, and hunt mentally in the kitchen for means to obviate or relieve them, we shall find an efficient armament not at all to be despised. Every physician is fully aware of all this: yet such is the force of habit that it seems more professional to write a prescription and order its administration so many times in the twenty-four hours, than to recommend recourse to some simple or familiar measure which would answer an equally effective purpose. Our patients themselves are much to blame for fostering this habit. If a physician is called in because some member of a family has caught cold, to take a familiar example, and orders the patient to put the feet and legs into warm water, to go to bed and wrap a wet towel about the neck, and to abstain from meat, spices, coffee, and tea, for a day or two, *materfamilias* jumps to the conclusion that nothing is the matter, that she has been unnecessarily alarmed, and she begrudges the pecuniary acknowledgment that she will have to make in consequence. Many a physician has had the money value of some of his visits questioned "because he did not prescribe medicine." Ten to one, the next time a member of her family is ill, the economic matron will try her own hand at home-remedies, and, ignorant of the principles that actuate her medical attendant in their selection, will run the chance of doing something injurious instead of beneficial. Physicians, however, must be true to their calling, and suffer the imputations to which ignorant or thoughtless patients subject them.

It is almost superfluous to instance the success of the homœopathic treatment as an example of the good

that can be accomplished without drugs; but we who cannot recognize any inherent efficiency in infinitesimal doses of medicines cannot look otherwise upon this practice.

Bread pills were fashionable at one time in the treatment of trivial complaints, the doses being given to quiet the apprehensions of the invalid, and the regulation of diet and of exposure, with resort to some of those practices which we designate as kitchen therapeutics, being depended upon as the direct remedial agencies. Many an apparent elaborate prescription is composed at the present day for similar purposes, in cases where it is expected that the physician should "do something," and where he feels that the step is superfluous. It is true that mental therapeutics is sometimes a necessary element of treatment; but it is a shame that we have to resort to unuttered deception in the science of healing.

Dilutents are often called for in the practice of medicine, and many of the articles used for this purpose owe most of their benefit to the water in which they are administered; and water alone, impregnated, it may be, with some kitchen remedy,—as currant-jelly, or even barley, for example, in simple erythematous sore throat,—will be just as valuable in many instances as a pharmaceutical extract.

Emetics are often called for, and in many cases mustard-and-water is just as valuable as sulphate of zinc or copper, or tartar-emetic, and so on, and sometimes more so.

In cases of severe cramp in the intestines, dry heat applied from the door of a range or furnace, taken off and wrapped in folds of flannel to protect the skin, will often give prompter relief than a dose of opium. The mustard-plaster, so much in vogue and so very efficient as a topical remedy in many affections, is a familiar example of the value of kitchen medicine.

The use of table-salt in restraining hæmoptysis, and even the use of oil of turpentine, may be instanced as further examples. Cayenne pepper will do as good service in certain affections, as in bowel-complaints, or used as a gargle in sore throat, or taken in spirits of some kind as a preventive of the deleterious effects of exposure to malaria, as many other remedies more frequently prescribed. Vinegar comes in use as a local application very often: it is good to impregnate a sponge both to allay excessive action in the skin in fevers and in the sweats of hectic. It is often as good internally, in some form or other, as are other acids, mineral as well as vegetable, to assist digestion in certain varieties of dyspepsia. It is often as good an ingredient in a gargle as any other acid, and very often the best inhalation that can be given in certain inflammatory conditions of the respiratory passages. Salt-and-water is an excellent tonic to the skin; an efficient laxative in moderate costiveness, judiciously managed, better often than any saline purge; the very best and least injurious substance to use in the nasal douche to detach the accumulated secretions of certain forms of catarrhal inflammations of the nasal passages. Spices of various kinds are splendid

carminatives internally administered, and, quilted between folds of flannel, they form an excellent bandage to be worn over the abdomen of patients subject to bowel-complaints. Dry salt similarly quilted between folds of flannel, and heated before a fire, retains heat a long time, and is an excellent application in painful conditions of the bowel.

Cucumbers, cabbage, tomatoes, fruits of various kinds properly selected, unbolted flour, milk, calves' brains, sweet-breads, oysters, terrapins, certain kinds of fish, and other articles of ordinary or occasional diet, contain certain ingredients, in far better elaboration than the skill of the pharmacist can prepare, which can often be utilized for supplying deficiencies in the economy in the treatment of chronic disease.

Milk, lard, and sweet oil applied to bruises, to harsh skins, or used for anointing the body in scarlet fever and the like, are often of the greatest value. In chronic ulcerative laryngitis entailing dysphagia, the preliminary deglutition of a little sweet oil will often protect the parts from the mechanical irritation of food, and render swallowing more efficient and less painful.

In this manner a great number of examples could be collected of the efficiency of kitchen medicine. The more it is resorted to, the less will we depend upon drugs, and the simpler will be the art of prescribing medicine.

The list of drugs is enlarging so rapidly, new remedies are so crowding older ones out of use, that it is well, once in a while, for the practitioner to reflect upon what can be done, in suitable cases, without resorting to drugs at all.

TINEA SYCOSIS.

BY GEORGE G. WOOD, M.D.

TINEA SYCOSIS, or what is popularly called "barber's itch," when met with in its true form is usually very hard to cure. I have thought proper to submit to the profession, through the medium of your journal, the two following cases which occurred in my own practice:

Case I.—G. D., a farmer, aged 26 years, came to me suffering from "barber's itch" contracted about one month previously in a barber-shop. He complained of an itching, burning sensation on the chin. His chin was covered with small pustules, which, on being opened, discharged a thick tenacious matter that dried into crusts. The pustules I found, on close examination, to be the inflamed hair-follicles, and on plucking out the hairs they presented a frayed appearance at the roots, like the strands of a string, which is unmistakable evidence of a parasitic disease of the hair-follicles.

For treatment I tried, in rotation, white precipitate ointment, weak solution of corrosive sublimate, citrine ointment, sulphite of soda, and, in fact, all the parasitic remedies at hand, but without avail. He came back each time complaining that the disease was growing worse. Looking through Niemeyer's Practice, I found his treatment of sycosis so peculiar that I determined, as a last resort, to try it in this case.

First I removed all the crust or scab, by softening it with glycerin, next had him shaved as close as pos-

sible. I then took my little sharp-pointed bistoury and opened every pustule that I could find. Where the pustules were confluent, I made cross-incisions through the clusters. Like the shaving, this scarification was not nearly so painful as might be supposed. I next touched each opened pustule and cluster of pustules with a very strong solution of corrosive sublimate, made by dissolving one part of the sublimate in two parts of alcohol. During the night I had the part covered with a rag thickly smeared with white precipitate ointment. I repeated this process every day on the new pustules as they appeared. At the end of a week he was completely cured.

Case II.—J. R., tailor, aged 45, came to me suffering from "sycosis" of six weeks' standing. Symptoms the same as Case I., with the exception of the disease being confined to upper lip. He had consulted other physicians without avail. Not feeling like subjecting him to the rigorous and somewhat painful treatment of Niemeyer, I tried the usual list of parasitic remedies, as stated in Case I., but without the least favorable result: so at last I adopted Niemeyer's treatment, as in the other case. At the termination of one week he was entirely rid of this loathsome disease.

It only remains for me to say that I am perfectly satisfied with this method of Prof. Niemeyer's as the surest and quickest that I know, and so I would recommend it for trial by other physicians. The disease destroys the beard so fast that we need a quick means of curing it.

MUNCY, PA., November 11, 1873.

NOTES OF HOSPITAL PRACTICE.

PHILADELPHIA HOSPITAL.

SERVICE OF DR. H. C. WOOD, JR., OCTOBER 8, 1873.

Reported by JAMES C. MERRILL.

TRAUMATIC OBSTRUCTIVE COLITIS—ANTIPHLOGISTIC ACTION OF MERCURY—RECOVERY.

ANDREA MOLARAWITZ, German, aged 30, was admitted into this hospital on October 1; states that one week before admission, while trying to stop a runaway horse, he was violently struck in the left iliac region by the shaft of the carriage. He suffered much pain for several days, and noticed that his bowels became obstinately constipated after the reception of the injury, and for this cause applied for admission here.

On admission he had much pain in umbilical region; belly very tympanitic, breathing diaphragmatic and rather labored. He was ordered a house injection and oil. This having no effect, he was ordered during the next two days several doses of oil, Epsom salts, and an injection of lime-water and oil. Croton oil was administered in divided doses, and, these having failed, a forced injection of two gallons of water. The battery was finally applied, and some hours after the use of the induced current the man had three or four small passages at short intervals. Since this time his bowels have not been open, he has suffered much pain, and has taken no food.

As the man lies before you, you see that his belly is swollen and tympanitic. Notice particularly that pressure on it gives him no pain, so that certainly there is no acute peritonitis. There is now a slight fulness in the iliac region, and two days ago faint localized dullness was detectable on percussion, and there was decided but not excessive tenderness over the swelling. Our patient has not vomited since admission, and passes an ordinary amount of urine.

Our patient has at no time suffered much, but what pain he has had has been referred to the umbilicus instead of to the seat of injury. This is very apt to occur in intestinal diseases. In short, gentlemen, obstinate constipation is the most marked symptom of the case: for the large amount of purgative medicine has had but very little effect.

What one of the usual causes of protracted constipation is present in our patient? We may reject external compression of the bowels, as from cancer or some enlarged gland outside of the intestine, and constriction, as from cancer, etc., in the intestinal walls, because in these the constipation comes on slowly and gradually increases, and the feces are long and ribbon-shaped. Among the causes of acute constipation strangulated hernia is not infrequent, and I would warn you to be constantly on guard and insist upon a most thorough examination in every case resembling this. In this man we can find nothing to justify such a diagnosis.

Large gall-stones arrested in the intestines may produce symptoms analogous to those now present in the patient before us; but constipation from such causes is always preceded by severe bilious colic, which has not occurred in the present case. Hard foreign bodies are occasionally swallowed and cause constipation; but this is rare except in children, and has not occurred in this instance. Incarceration, when the bowel is bound down by bands of false membrane, as after peritonitis, has obviously not taken place here, because there has been no antecedent disease of such nature. The three most common causes of such symptoms as those of this man still remain for our consideration.

Fæcal accumulation is by no means rare: indeed, if you are called to a case similar to this, but with a history of chronic constipation, you may almost take it for granted that this is the cause; and, even if a history of diarrhœa is given, do not fail to assure yourself as to the absence or presence of a fæcal mass. The most common seats of this accumulation are just above the sigmoid flexure and low down in the rectum: if in the former position, an indistinct tumor is usually detectable by palpation or by dullness on percussion; if in the latter, digital exploration of the rectum will reveal the cause. This man, on his admission, was treated for fæcal accumulation, but, as you see, without success; nor can an impaction of feces be detected by the means just mentioned; and I think the exciting cause of his protracted constipation is more serious, being either *invagination* or *enteritis*.

Invagination, in which the bowel is forced into itself like the finger of a drawn-off glove, at first permits an occasional passage of feces, or even allows of diarrhœa; later the œdema may cause such swelling of the coats of the bowel as to totally obstruct the canal. The characteristic symptoms are a sudden onset, vomiting, pain usually intermittent and not very severe, more or less complete constipation, and after a time passage of blood *per anum*, from rupture of the congested obstructed vessels at the seat of invagination. The vomiting may even precede the pain and constipation: it consists at first of ingesta, is then bilious, and later still stercoraceous. The latter generally indicates occlusion, and is always a very unfavorable symptom, particularly in males; in females it is sometimes caused by hysterical intestinal spasmodic occlusion. A tumor is usually detectable.

In the case before us all the above symptoms are, or have been, present, with the exception of vomiting and passage of blood *per anum*; and the question arises, Does the absence of these signs warrant us in rejecting the diagnosis of invagination? By exclusion we have already arrived at the diagnosis that the patient is suffering either from invagination or enteritis. Remem-

ber, the history dates back to a traumatism of the part, and the position of the lesion is the favorite position of obstructive enteritis,—the neighborhood of the sigmoid flexure.

Vomiting is as much a symptom of enteritis as of invagination; but its severity in either case is proportionate to the nearness of the lesion to the stomach, and its absence in our patient is probably simply due to the obstruction being low down in the neighborhood of the sigmoid flexure. As invagination is the severer of the two diseases, the probabilities seem to be that vomiting, even when the bowel is affected very low down, would be present more certainly in it than in enteritis. Hence the absence of vomiting inclines us towards enteritis in the present case. The absence of blood from the passages at this late date seems to me of vital importance. I believe it proves that the case is not invagination. If this be so, our patient must be suffering from enteritis, or, more correctly, colitis, as it is undoubtedly the large intestine that is affected.

The diagnosis having been made in our case as traumatic paralytic enteritis or colitis, the question of treatment follows. When the man was first under care in the hospital, he was treated, as you have been told, for fæcal accumulation. If the true character of the disease had been detected at first, leeching over the seat of injury would no doubt have been practised; but antiphlogistic measures were not resorted to until a few days since, when the patient was put upon the use of opium and of blue mass. Yesterday afternoon pyalism was first detected, and simultaneously an improvement was noted, not a sudden marked one, such as follows relief by the action of a purgative in fæcal accumulation, but the slight amelioration of symptoms such as should be expected to follow the action of a drug which lessens the cause of the obstruction, namely, inflammation. The expression of the man's face was much less anxious, the tongue was more moist and less heavily furred, the local abdominal tenderness and the abdominal pain were less. This morning these signs of improvement have increased; last night the man passed flatus spontaneously and freely, and the tympanitis is greatly lessened, and the tumor imperceptible.

Although he has had no stool as yet, I make confidently a favorable prognosis, because by the influence of the mercury the inflammation, the cause of the obstruction, has been conquered. To aid, however, in the production of a stool, a drachm of castor oil shall be given our patient every two hours. Liquid diet, *i.e.*, milk, shall still be freely administered. [The night subsequent to the clinic, four evacuations took place, and the man slowly but steadily convalesced from that time until he left the house, cured.]

TRANSLATIONS.

THE INFLUENCE OF ALCOHOL ON THE TEMPERATURE OF THE BODY.

By DR. FRANZ RIEGEL (*Deutsches Archiv für Klin. Med.*).

OBSERVERS in previous years were accustomed to ascribe to alcohol the power of elevating the temperature of the human body when introduced into the stomach, being led to this conclusion by the subjective sensation of warmth perceived by the subject of the experiment and observation. Observations, however, of later date have led some experimenters to a diametrically opposite conclusion,—*i.e.*, that the ingestion of alcohol into the economy is conducive to a reduction of the bodily temperature. Many of these experiments have been made upon inferior animals; and to these too much authority must not be given, for it is

of common experience in experiments upon small animals to have a marked reduction of temperature consequent upon trifling influences, and in a majority of these cases direct proof of the causation of the phenomena observed by the alcohol swallowed is wanting. In addition to this, the relative quantity of alcohol employed is so large that while the result may be of use as demonstrating the influence of alcohol upon the bodily temperature, it cannot be applied to solving the question as to the use of alcoholic stimulants in the treatment of disease, where small quantities are to be administered through long spaces of time.

For these reasons Dr. Riegel disregards the results obtained from experiments upon the lower animals, and confines his attention to the data of those experiments which have been made upon men, both healthy and diseased.

He deals only with the more important modern researches upon the subject, and with those only which have been conducted with special reference to the alteration in temperature, inasmuch as he has to do not with the special indications for the administration of alcohol, but only with its effect upon the bodily warmth.

Todd and his followers were the first among modern writers who strongly advocated the administration of alcohol in febrile and inflammatory affections. While his doctrines found many advocates in England, America, and France, in Germany they were received with a less degree of favor, due partially to the small number of experiments made to establish their truth or falsity, partly also to the variety of results reached by observers. In all the recent observations a great discrepancy of results is noticed, being, no doubt, partly due to a want of accuracy and frequency in examining and recording the variations of temperature.

The principal object of Dr. Riegel's own investigations has been to note the variations of temperature consequent upon the administration of alcohol in healthy individuals, as well as in those in all stages of fevers and in convalescence. He considers that the effect of the administration of alcohol upon the temperature is the most certain criterion as to the propriety of its use in the treatment of fevers, and if, as some recent investigators have asserted, this is constantly followed by an elevation of the heat of the body, its use can only be justified in the treatment of patients in a state of collapse or of those who have been previously habituated to its employment. If an elevation of temperature consequent upon the use of alcohol cannot be proven, there is nothing from this view of the case to contra-indicate its use, for it is only rational to endeavor by its timely employment to husband the forces of the economy. The argument in favor of its use becomes much stronger if it can be demonstrated that it has the power to produce a diminution of temperature, and that this power is increased by an increase in the amount administered.

Dr. Riegel's experiments number eighty-six, and in each case comparisons were made with the normal temperature of the same individual. The thermometer in many cases was introduced into the rectum as well as the axilla; and, from the discrepancies sometimes observed, the former locality is regarded as the preferable one for observations of this nature. In a majority of the cases white or red wine was employed; in some, alcohol diluted to a greater or less degree. From the observations made under the above conditions upon the first class of cases—convalescents—the following conclusions were drawn: 1. Alcohol, even in moderate doses, in many cases causes a lowering of the temperature of the body. The amount of this diminution averages as a rule only some tenths of one degree. 2. Only exceptionally is there noticed an elevation of the temperature consequent upon the administration of alcohol; not unfrequently, at least after minute doses,

there is no noticeable change. 3. The diminution of temperature in convalescents is, as a rule, less than in healthy subjects, or it may be altogether wanting. 4. In those who habitually drink alcoholic stimulants the depressing influence of alcohol upon the temperature is almost always wanting. 5. The frequent repetition of the doses of alcohol diminishes their lowering effect upon the temperature. 6. The amount of diminution of temperature is directly proportional to the dose of alcohol given. 7. The depression of temperature caused by alcohol is for the most part of but short duration, and the temperature soon returns to its previous grade.

These experiments, then, show that the administration of alcohol to convalescents and healthy subjects, if followed by any change in temperature, gives rise to a diminution in the bodily heat, but they do not justify the conclusion that a like result follows its use in febrile cases. To ascertain the effect of alcohol upon cases of this class, experiments were made upon patients suffering from acute articular rheumatism, typhus, erysipelas, etc., and the conclusions reached do not agree with those previously stated. In conclusion, Dr. Riegel states that the influence of alcohol, given in moderate doses, upon the temperature both in febrile and non-febrile states, is comparatively insignificant, but if any change is produced it is more common to have the temperature lowered than elevated. But, although alcohol cannot be looked upon as possessing anti-febrile powers, yet the proof that its administration does not cause any important change in the heat of the body presents us with a strong argument in favor of its use to prevent the too rapid waste of tissue in febrile affections.

The dangerous elevation of temperature must be combated by the use of cold and the other means at our command. Alcohol meets the second indication, to prevent waste of tissue and favor reparative action.

WILLIAM ASHBRIDGE.

IMPERFORATE HYMEN (*British Medical Journal*, October 18, 1873).—Dr. D. Lloyd Roberts reports the case of a girl, aged 20, who suffered from the effects of an occlusion of the intravaginal orifice by a congenital fibroid-like and unyielding hymen. The abdominal cavity was occupied by a tumor, which sprang from the pelvis, fluctuated freely, was dull on percussion, and extended centrally above the umbilicus and laterally into the flanks. She voided her urine with great difficulty, and only while resting on her hands and knees. She had constant backache and headache, constipation, shooting pains in the pelvis, and a distended and inflamed urethra. She was anesthetized, and a small exploratory trocar was passed through the centre of the imperforate hymen, when a dark treacly fluid showed itself at the external orifice. A large trocar was then introduced, and the fluid allowed to pass through the tube, aided by gentle but firm pressure on the abdomen. Eighty-four ounces were thus withdrawn, and during the subsequent fortnight about twenty more ounces oozed away. In a month the opening in the hymen was enlarged with bougies, and the membrane was still further divided. The only unfavorable symptom in the progress of the case was the occurrence of some abdominal pain and tenderness, with general pyrexia, about four days after the operation. This trouble was due to a cessation of the discharge, which had also become offensive: it passed off as soon as the flow was re-established. Dr. Roberts considers this as illustrative of the cause of death after most abdominal and pelvic operations, which he believes to be septicæmia, and not, as generally supposed, metritis or peritonitis.

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EDITORIAL.

WHITHER ARE WE DRIFTING?

AMONG the signs of the times which it behooves those who are interested in the reputation of our profession to watch, is the treatment of the medical staffs of our hospitals by the boards of managers. "Honor the physician" was, according to all accounts, a well-obeyed maxim in the days of our fathers; but now the high and mighty potentates who make up the governing boards too often appear to think that physicians are simply their artisans, porters, or draymen, to move at their bidding,—their pawns, to be placed here and there as whim or motives of policy may dictate.

Formerly, the attending physicians were looked upon as co-workers for the common weal, equal in right and in service with the managers themselves,—co-workers to be consulted, not insulted,—co-laborers whose brains and especial training gave them a right to speak and gave weight to their spoken words.

Now, when a revolutionary movement is contemplated, when a motion, perhaps owing its origin to the zeal without knowledge of some nervous trustee, takes shape, the staff find their notices in the morning paper on their breakfast-tables. A very recent and seemingly a very flagrant instance of this grave breach of courtesy is seen in the action of the Board of City Trusts at their last meeting. "Whereas," says the newspaper minute, "Whereas, ministering to the bodies of the poor, with the view of affording them relief from suffering, is a work of mercy

eminently proper for the Lord's day; and whereas, it frequently occurs that incessant labor through the days allotted to work is necessary, either from poverty or from the undue extortions of employers, thereby causing the neglect of the ailments of the eye: therefore, *Resolved*, That the Committee on Minor Trusts arrange with the surgeons to have the Dispensary at Wills Hospital open from two to three o'clock on each afternoon, including Sundays, from January 1, 1874, for the treatment of the eye."

The passage of such a resolution without consultation with the staff of surgeons was, we repeat, a grave breach of courtesy. What is involved? Simply this: that men who have toiled through the week, who have, perhaps, arranged their time through six days that they may have a few hours of quiet on the seventh, shall yield this too, and toil on, worse than the treadmill drudge, who has his day in seven. Simply this: that men who have daily given hours of work to charity shall strip themselves of their weekly dole to their wives and children. In truth, it was a grave breach of courtesy. The men thus ordered without consideration are in every way the peers of those whose thoughtlessness has forgotten their claims; and yet not a man of that board would have ordered his hired employees to give their labor on the Sabbath in such an off-hand manner as is demanded the unpaid labor of the physicians.

This action of the board was, however, not merely a grave breach of courtesy, but, to our thinking, also a great breach of good sense, and seemingly that which has been said to be worse than a crime,—a blunder.

In the first place, the medical staff of the hospital know far better than do the Board of City Trusts the wants of the poor. The difference is that which lies between the theoretical knowledge that comes from riding from hospital to hospital board meeting, from organizing charities, from doing what is perhaps most excellent and praiseworthy work, but work personally distant from the poor, and the practical knowledge which comes from daily personal contact, from visiting the poor in their homes, from hours spent by the bedside of the sick in the hospital. Surely it would have been but the dictum of common sense to consult with the men who had this knowledge before entering upon a measure which is almost unheard of in the annals of Philadelphia charity. In the second place, it is well to "look before you leap." We do not know what measures the staff will take,—we understand, however, they will offer a strong remonstrance at the next meeting of the Board of City

Trusts,—but this we do know, that if they refuse to perform the duty they cannot be compelled, and the Board of City Trusts cannot help themselves, since there are not enough oculists outside the staff in the city of Philadelphia to organize a new service, even if our specialists were so devoid of self-respect and of professional *esprit de corps* as to accept positions under such circumstances.

PROFESSIONAL ADVERTISEMENTS.

IN our late editorial upon the above subject we hastily included St. Mary's Hospital in the list of sinning institutions. Further inquiry has satisfied us that it has preserved its virginity unspotted.

A member of the medical staff of the Wills Hospital has called upon us to ask correction of an error which we inadvertently made in including the name of that institution among those which advertised their staffs. Formerly the hospital did so, and we were not aware that the custom had been discontinued. The same informant tells us that in the discussion which occurred at the time of discontinuance, the defence of the advertising was that "Pennsylvania Hospital did it." The more this matter is investigated, the more the responsibility is seen to rest upon the Pennsylvania Hospital; and one thing seems certain, if the medical staff of that institution will request the discontinuance of their advertisement by the board of managers, the battle will be won,—a great and widening breach in our profession will be healed. We trust that they will do it.

We have another word to say on this matter,—this time to the "contributors" of the hospital. The hospital needs funds. "Our beds are empty," we are told, "for want of them, and the poor are suffering." In the name of charity, we say to the wealthy, Give; but in the name of justice we ask, Is it right to put the money given for the healing of the sick into the pockets of the newspaper-owners? Why should a hospital be advertised at all, especially a hospital so well known? If advertised, why should there be more than a mere announcement? We do not know exactly how much money is at present spent in parading the names of the medical staff before the people, but we are informed, on what seems to us undeniable authority, that not long since the hospital was advertising at the rate of four thousand dollars a year. Ten empty beds in the hospital! Ten suffering sick in the city!

WE feel assured that the amount spent in advertising was reduced so soon as the managers comprehended how enormous it was. But the same principle is involved in spending one thousand dollars as in spending four thousand dollars. Those in need of hospital aid will certainly find out the boon if it be simply offered them. It must be only the very, very poor and ignorant of our city who, in the hour of sickness or of mortal injury, have not light enough to see the portals of the old Penn Hospital looming up in the distance. Such persons, however, do not read the high-toned papers in which much of this advertising is done, if indeed, as is more than doubtful, they read any papers at all.

We can perceive only one class which is reached by these advertisements. Merchant Longpurse, whose maid-servant is ill, looks into his morning *North American* to see who is on duty at the hospital, that he may send his coachman across the way to get a note of admission, rather than to trouble him to go to the hospital with the girl in regular form. We wot not, however, that this is really any advantage to the hospital or heals in the least the sufferings of the really poor who languish outside because the institution has not funds to receive them.

SIR HENRY HOLLAND died at his residence in London on his eighty-sixth birthday, the 27th of October, having just returned from an extended continental tour. It will be long before a successor possessing his varied accomplishments, and combining, as he did, profound medical knowledge with literary and scientific culture, will be found to fill the void which his death has left in the profession. A highly successful practitioner, commanding not only the love and respect of his patients, but also the esteem and affection of his medical associates, an indefatigable and adventurous traveller over three continents, a facile and prolific contributor to the higher periodicals and to the library of his profession, and, withal, a brilliant and fascinating ornament to the refined society in which he mingled, he has been the Admirable Crichton of our century, and has won for himself an enduring niche in the history of his time, and a warm place in the hearts and memories of those who survive him.

He graduated at Edinburgh in 1811, having visited Iceland and written his thesis on the maladies peculiar to its people in such a manner as to call forth many compliments from his examiners. Settled in metropolitan practice, his many endearing qualities, his happy blending of confidence with reserve, his instinctive knowledge of the world,

and his charm as a companion, added to his great professional skill, soon achieved for him a success which secured him at once a competence and undisputed social and literary position. Although, with rare self-denial, he limited his practice so that its earnings should not exceed five thousand pounds per annum, and thus secured to himself two months out of every twelve for foreign travel, and additional time in which to prosecute his favorite scientific studies, yet it is said that he leaves a fortune of about nine thousand pounds a year.

The fruits of the hours thus set apart have long been familiar to the profession. The acute philosophy of his "Medical Notes and Reflections," the logical clearness of his classic treatise on "Mental Physiology," and the vivid, comprehensive portraiture of the diplomatic, artistic, and literary world of the last half-century, contained in his "Recollections of Past Life," are all well known to medical readers.

Eight visits to America rendered him familiar with this country, of which he always wrote in friendly terms; and he speaks with enthusiasm in his last publication of the pleasure with which he had journeyed for two thousand miles along the St. Lawrence, navigated the waters of the Upper Mississippi, followed the Ohio, Susquehanna, Potomac, and Connecticut Rivers far towards their sources, and enjoyed the lakes, waterfalls, and mountain-gorges of the Ottawa.

His multifarious occupation of course left him but little time for purely professional business. He was never connected with a hospital, he never held office in the College of Physicians, nor was he ever seen in public medical circles; yet no name was better known in polite society, and he numbered among his intimate friends all who were distinguished as wits, scientists, or *littérateurs*.

Few men have led so active and yet so equable and happy a life, few men have so well united in themselves the social and professional qualities which should adorn the typical physician, and few men have been so widely and sincerely mourned for, as Sir Henry Holland.

"OUR Boston cotemporaries" have replied to the *British Medical Journal* in regard to the death from ether reported in the issue of October 11 of that journal. The form of the answer is as a letter from Prof. H. T. Bigelow. He says,—

"A feeble boy was etherized. During this process, though only partially narcotized, he was very completely asphyxiated, and, when nearly dead, was oper-

ated on without efforts at resuscitation. When at last his absolute prostration awakened serious alarm, he was vigorously flogged, with the view of restoring his exhausted strength, and under this active stimulus was excited to a final muscular effort, which expended and extinguished his flickering vitality. I believe that such a death might have occurred without the ether."

Afterwards he analyzes the case in such a way as to seemingly prove the correctness of his view.

IN England, as is well known, people, unlike the Americans, object to eating adulterated food, and there is a system of government inspection, with heavy fines, and even imprisonment, for those detected in selling such adulterated articles. According to the *British Medical Journal* of November 15, the bakers of Shoreditch Vestry, London, have been a little too much for the official analyst, Dr. Stevenson, Examiner in Toxicology to the University of London. They set their snares and nets so skilfully as to metaphorically land him high and dry, floundering about to no purpose. Loaves of bread of undoubted purity were labelled by him officially as being probably adulterated, whilst one loaf in which a drachm of alum had been purposely put received the official commendation of "not adulterated."

CORRESPONDENCE.

FORT SNELLING, MINN., November 24, 1873.

TO THE EDITOR OF THE PHILADELPHIA MEDICAL TIMES.

IF sponge tents are coated with oleum theobromæ, their roughness disappears, and their introduction is not unpleasant.

Very respectfully, your obedient servant,

M. PENHOEL.

PROCEEDINGS OF SOCIETIES.

PATHOLOGICAL SOCIETY OF PHILADELPHIA.

THURSDAY EVENING, OCTOBER 9, 1873.

THE PRESIDENT, DR. J. H. HUTCHINSON, in the chair.

DR. WILLIAM PEPPER exhibited, for Dr. MACKENZIE, of Conshohocken, a specimen of *carcinoma of the liver* from a child *eight weeks* old, born of healthy parents who had two healthy children and a fourth who was the subject of epilepsy. The father was about 40 years old, the mother 36. The child seemed well at birth, took nourishment well, and was always a good child; it continued well, taking nourishment regularly, nor was there any increase in the size of the abdomen, up to ten days before death. The enlargement of the abdomen was firm and hard, and there was no sense of fluctuation; it increased rapidly, and there was increased prominence of the cutaneous veins. There

was no jaundice, no emaciation, no cachectic appearance. The only marked symptom was pain, which caused the child to cry out, and seemed to be increased when the body was turned to the left side. The urine was normal, and the stools were natural, though greenish at first.

At the *autopsy* the lungs and heart were found healthy. The stomach was healthy; the kidneys were not examined. There was no peritonitis, but about eight ounces of mixed clotted and fluid blood lay in the abdominal cavity. The clot lay over a large mass springing from the substance of the liver at a point of rupture.

Liver.—Weight, 11 ounces, 307 grains; entire organ measured six inches in transverse diameter. There were no evidences of inflammation of its capsule, which was smooth over most of the organ. The bulk of the organ was yellowish in color. The *right lobe* was free from any morbid growths, and of normal shape. The gall-bladder was healthy, and the biliary passages were free. The *left lobe* of the liver was the seat of a large, rounded growth, which occupied its entire extent, projecting from both the upper and lower surfaces. The tissue composing this mass appeared dark, in places almost blackish, through the capsule. It was three and one-eighth inches across, and two inches thick. On the antero-superior part of the growth was a ragged, softened, and torn area, about one inch in diameter, where the peritoneum was ruptured and partially destroyed. On section, the tumor presented the characteristic appearances of hæmatoid cancer.

Portions of the tumor were sent to Dr. TYSON for examination, who returned the following report: "I have examined the morbid specimen, and find it made up of a rather large-meshed stroma, filled with blood-corpuscles and cells, of which the accompanying drawing exhibits types. They are mostly pale, faintly granular, and generally contain one indistinct nucleus. Comparatively few multinuclear cells were present. Others of the cells were more highly granular, and others completely fatty. Some free oil also was present. There were very few pigmented cells, the coloration being mainly due to blood, of which there was a great abundance and apparently outside the vessels, as none of these were seen in sections treated with acetic acid; though it does not follow from such examination that the tissue was not extremely vascular. Indeed, I incline to believe it vascular. The piece of liver of more normal appearance was highly fatty, many cells being completely filled with oil, of which there was also an abundance free floating. The cells were more numerous in relation to the fibrous tissue, and more numerous than in the morbid portion."

Dr. PEPPER remarked upon the rarity of this affection in young children, and that the localization of cancer in them was very singular. Cancer of the kidney, for example, is relatively common in children under two years; there are also a certain number of cases of cancer of the glands; but other forms are rare.

Dr. BERTOLET asked whether the tumor was not very vascular. He said that if it was an *angionoma* taking on cancerous change secondarily, the case would be more consistent with experience, since this form of tumor is not very uncommon in children.

Dr. TYSON said that, although the mode of examination he had employed had not revealed any blood-vessels, he had, nevertheless, thought it likely that the tumor was rich in them, not only from its gross appearances, but also from the large number of corpuscles which occupied the meshes of the stroma.

Dr. PEPPER said that the history of the case was peculiar in this, that the development of the growth was very rapid, and that there was no cachexia.

The specimen was referred to the Committee on Morbid Growths, who reported it to be one of *carcinoma*.

Dr. H. LENOX HODGE presented a *large fibro-cellular tumor of the lower extremity*, measuring around its base 37 inches, over the anterior surface from above downward 27 inches, obliquely 37 inches, and laterally 35½ inches; removed a week ago, by amputation through the middle third of the thigh, at the Presbyterian Hospital, from a colored woman, 28 years of age. She states that as long as she can remember she has had an enlargement over the front of the knee; that it has gradually grown until it has attained this great size. She is the mother of four children, and, until a month ago, was able to take care of her children, attend to all her household duties, and at times she went out to do a day's work. She has not had pain in the tumor, but has only suffered from its great size and weight. The base and attachments of the tumor extend over the front of the thigh as high as the middle third, and around the outer side to the posterior surface, and across it to the inner side of the popliteal space. On the leg below the knee it was attached to the upper fourth; but when the patient stood the tumor hung pendulous, so as to reach nearly to the ankle. The surface was irregular, and in places lobulated. On the inner side the patella could be felt, and a sense of fluctuation detected. On section the tumor presented a dense fibrous structure, bathed with a clear limpid fluid and traversed by numerous large veins or sinuses. Many of these were large enough to have received a finger into their interior. The arteries were branches from the articular of the popliteal and the anastomotic of the femoral. They were little larger than normal. The knee-joint was distended by nearly a quart of straw-colored fluid. The cartilages covering the patella and tibia and the condyles of the femur were ulcerated; yet the patient, with this condition of the knee-joint, and notwithstanding the great weight of this large tumor, was able to walk and to labor. Several gentlemen of this Society have examined the structure of the tumor microscopically, and Dr. BERTOLET has kindly sent the following note as embodying the result of his observations:

"DEAR DOCTOR,—The tumor is a *sarcoma*. Although different sections show great variations in structure, yet the prevailing type may be put down as the small rounded. In numerous places the cells assume a larger habitus; here and there giant cells are seen. Stellate and spindle cells are also met with. The fibrillated interstitial substance is in many places so richly developed that the cellular elements are nearly lost sight of. It is this condition that gives the comparative firmness to the growth and renders the prognosis less unfavorable than in the softer varieties; yet repullulation may be expected even in a growth presenting these characters.

"The preponderance, in many places, of the fibrillated structure would warrant the designation of fibro-sarcoma; but this term, as well as that of fibro-plastic or fibro-cellular tumor, is also liable to lead to confusion.

"Truly yours,

"R. M. BERTOLET.

"October 8, 1873."

A dissection of the tumor has been made, showing its vascular supply and its attachments. Its origin appears to have been from the subcutaneous areolar tissue, with attachments to the deep fascia. The patella was found to have been laterally displaced, so that its upper or anterior surface presented inwards.

Since the operation the patient has done very well, and is now able to sit up in bed (Nov. 1).

Dr. BERTOLET said he had examined sections from the most dependent part of the tumor. He thought the result interesting as bearing upon the origin of the growth. If the giant cells are to be considered, as contended by some, as migrating from the bone-cells, then it might be said to be highly probable that the

growth emanated from the cambium layer of the periosteum, a site very rich in myeloplastic cells. This point could, however, only be ascertained when a more complete division of the growth had been made.

Dr. T. B. REED asked Dr. BERTOLET whether it was possible that this tumor could have originated from an enlarged bursa.

Dr. BERTOLET replied that such an origin was possible, but, judging from the microscopic characters presented, he thought this tumor did not so arise; that it started more probably from a bony layer; that if it had started from a bursa it would more likely have exhibited more of the lipomatous character, or simple sclerosis of the connective tissue,—the latter condition and the lipoma arborescens being the most frequent attendants of affections of the synovial membranes.

Dr. DE F. WILLARD had examined several sections of the tumor, and found many spindle-shaped and round cells, but did not discover any giant cells. There was also a fibrillated element, which decidedly predominates, and he thought the growth had its origin in the connective tissue of the part.

Dr. HODGE said in reference to its origin that it seemed to be in the connective tissue external to the muscles. In reference to the possibility of such a tumor originating in a bursa, one of the surgeons connected with the hospital mentioned a tumor which had come under his observation about two-thirds the size of the present one, which he thought was a fatty tumor, but found it really an enlarged bursa of the patella. Dr. HODGE further said that the patient up to the present time was doing perfectly well. She had, however, soon after the operation, extruded a dead foetus, which was in a state of decomposition, apparently dead two or three weeks. She was not aware that she was pregnant, and had stated that her courses had occurred three weeks before the operation.

Dr. JOHN H. PACKARD thought these tumors were particularly interesting in regard to diagnosis, which in this situation offered great and peculiar difficulty. In 1864 he had exhibited to the Society a tumor of the thigh weighing fourteen pounds, removed from a woman, age unknown. Several surgeons who had been consulted declined to interfere, and from a number of creases and cicatrices upon its surface a vascularity had resulted, which gave it the appearance of a malignant tumor. The appearance was truly deceptive, but a careful examination led him to believe that it could be safely removed.

The patient was obliged to carry the tumor in a bag, supported by a strap passing over the opposite shoulder. About six weeks after the doctor saw her, she died of cerebro-spinal meningitis; and in order to get the body into the coffin the tumor had to be cut off. It was sent to him for examination, when he found it to be a simple fatty tumor, which could readily have been removed.

Dr. TYSON referred to the large sarcoma of the thigh presented by Dr. MAURY about two years ago. He thought tumors in this situation were generally sarcomata.

Dr. HODGE asked Dr. BERTOLET whether it was common to have veins so large as those presented in this tumor.

Dr. BERTOLET said he did not recollect any statement to that effect, and had never examined into this point; but the larger the tumor the larger we would expect to be the veins; also that it is very natural for sarcomata to be extremely vascular, and at the same time the adventitia of the vessels are thickened. The favorite sites of these colossal sarcomata are the extremities of the long bones,—the femur, humerus, and tibia. There is also the peculiarity of slow growth, and this further peculiarity, that the lymphatics seem to escape, even when we have metastases in distant organs.

Dr. PACKARD presented for Dr. WM. MOSS, of Chestnut Hill, a portion of *intestine containing enlarged Peyer's patches* from which there had been *hemorrhage, causing death*, from a boy aged 5 years. The following history was furnished by Dr. MOSS:

"I saw the patient October 6, 4 P.M. The history of his attack is as follows. On the night of the 5th he had gone to bed in perfect health and high spirits. In the middle of the night his parents were waked by him, and found him complaining of pain in the epigastric region, and vomiting. The vomiting lasted through the night, but ceased on the morning of the 6th; the pain, which was not intense, abated without entirely ceasing. When I saw him he was pallid, pulse 160 and very weak, extremities cold, pupils much dilated, but sensitive. He lay with eyes closed, occasionally tossing his arms and head, speaking only when addressed, but then answering promptly and to the purpose. He did not complain of pain, but, when asked, always laid his hand upon the epigastrium. I observed no mental confusion; but his mother had noticed, several times in the day, slight and fleeting hallucinations.

"His abdomen was natural to the touch, neither swollen nor retracted, and very slightly sensitive on pressure. The vomited matter consisted of the usual contents of the stomach, with many grape-stones. I gave a guarded opinion that his condition might be due to prostration from prolonged vomiting caused by the indigestible fruit, or that we might be at the beginning of a sudden attack of meningeal inflammation.

"I ordered friction and external heat, and a small dose of sp. æth. comp. Saw him again in an hour; the medicine had been immediately rejected, with a flood of coffee-colored liquid. I repeated the medicine, which was retained. He said that the pain was gone, and that he was comfortable. A few minutes after 8 P.M. I was sent for, in haste. As I entered the room the child breathed his last. There had been no change since I last had seen him until just before they sent for me, when he grew more feeble.

"He had been a perfectly healthy child. Two years ago I attended him in well-marked typhoid fever.

"The post-mortem examination revealed that death had occurred from hemorrhage into the intestine from rupture of a vessel in a Peyer's patch, which had perhaps never completely cicatrized. The immediate cause of the hemorrhage was constriction of a large portion of the ileum by a band of adventitious tissue, through which the intestine passed and became strangulated."

Dr. J. C. WILSON presented a specimen of *perforating ulcer of the small intestine*, from a case of typhoid fever. The patient was a girl, aged 15. Symptoms of perforation appeared on the twenty-third day, and she died in a few hours. Peritonitis was localized to the lower parts of the abdomen. The perforation was oval, about three lines by four, and was situated seven inches above the ileo-cæcal valve. A ring of lymph was deposited upon its margin, both in the inner and the outer surface of the gut. A small quantity of opaque serum mingled with blood was found in the peritoneal cavity.

Dr. R. G. CURTIN presented a specimen of *tubercular ulceration of the small intestine*, from A. B., æt. 24. He had been in the army and navy, and while in these two branches of the service he contracted yellow, typhoid, and intermittent fevers. After leaving the service his health was quite good until about a year ago, when symptoms of pulmonary tuberculosis appeared. This disease progressed slowly until a few weeks ago, when symptoms of severe intestinal disease appeared, which soon caused his death. He had intense pain in the abdomen, with about six stools daily.

At the post-mortem examination, the lungs were

found to be filled with cavities, and along the small intestine from the pylorus to the ileo-cæcal valve, every few inches, large ulcers were found. These ulcers were oval in shape, and measured one and a fourth by three-fourths of an inch, the larger diameter being transverse. In the centre of these ulcers large sloughs were found. The piece shown was the lower part of the duodenum and the upper part of the jejunum. In the specimen the valvulæ conniventes were greatly swollen and red around the ulcers, which, with the dark raised central sloughs, gave the ulcers the appearance of flowers. The mesenteric glands were found to be enlarged.

REVIEWS AND BOOK NOTICES.

NOTICE BY JOHN H. THOMAS, ONE OF THE COUNSEL FOR THE DEFENCE IN THE CASES AGAINST MRS. E. G. WHARTON, OF ATTACKS MADE ON HIM AND HIS COLLEAGUES BY DRs. S. C. CHEW AND P. C. WILLIAMS, AND PROF. WILLIAM E. AIKIN. Pamphlet. Baltimore, 1873.

The literature of the Wharton case seems likely to usurp a whole shelf in the medico-legal libraries of the future. Notwithstanding all that has been written, it seems that all the "facts" have not been so fully and distinctly brought before the public *by the defence* as the cause of truth and justice demands.

The author of the present pamphlet, John H. Thomas, Esq., long well known as one of the leading members of the Baltimore bar, was one of the most prominent counsel for the defence in both the trials of Mrs. Wharton. This gentleman is as proverbial for the suavity of his manners and his courtesy towards the witnesses at a trial as he is for his legal powers. When, therefore, he feels it necessary to take up his pen in vindication of himself, his colleagues, and his profession, from the aspersions of certain professional witnesses for the State, we may be sure there is "good and sufficient cause therefor."

Dr. Williams and Profs. Chew and Aikin have very freely ventilated their personal feelings, after their signal overthrow as "experts" in both trials. Unhappily, they have been betrayed by their disappointment into making most unjust and unprofessional attacks not only on the experts for the defence, but likewise on the opposing counsel, and on Mr. Thomas in particular. The latter, however, having unsheathed his sword, deals most trenchant blows at his accusers, nobly defending the legal profession, as likewise his own associate expert witnesses, who had been so traduced by their opponents.

This pamphlet of Mr. Thomas is doubly valuable because Dr. Chew has appealed to Mr. Thomas, or perhaps it would be more accurate to say has quoted Mr. Thomas as approving of his course; and it establishes certain points whose publicity should forever silence the clamor of those who continue to hunt down Mrs. Wharton—although she has been duly acquitted by process of law—with a persistency unheard of in the history of expert criminal jurisprudence, endeavoring to lay before the public evidences of guilt which were not in the legal testimony. Mr. Thomas distinctly proves gross misrepresentation on the part of Drs. Williams and Chew, and clearly shows that the Philadelphia experts acted conscientiously and without reproach; ay, that the very things in regard to them that Dr. Chew now denounces in such bitter terms were known by him before the experts went upon the stand, and *received his approval*.

Dr. Chew and his colleagues affirm that they were not voluntary witnesses, but were forced to attend upon

the trial by process of law. *They know that this is not true.* The pamphlet before us shows that their actions were voluntary,—so much so that the large claim which they, disinterested men, have made for compensation has not been granted by the Baltimore authorities, "but has been bandied about from the Register of the City to the Mayor, from the Mayor to the State's Attorney, because it was for services *not required and not provided for by law.*" It was they who, when poisoning was suspected, did not, as was their bounden duty under the laws, call the attention of the authorities to it, but made themselves the first post-mortem, and the first accusation, without the sanction or even the knowledge of the authorities.

It was they who dispensed with such trifles as the formulæ of a legal inquest,—a coroner and his jury,—and "took upon themselves the office of State's Attorney, coroner, and expert," and made—also voluntarily—a second and a third post-mortem; voluntarily, because there was no one on earth having authority to compel them to do it. It was they who day by day attended the trials most closely, and sat by the prosecuting counsel, prompting questions for the cross-examination of the experts for the defence. It was they who, as proven at the trial, gave at the time of the sickness of Mr. Van Ness repeated opinions that the chief attack was simply due to heat and exhaustion, and yet swore before the grand jury that the same attack was produced by tartar emetic, and testified on oath at the trial that strychnia was the only possible cause of it.

These men—the source, the very soul and centre, of one of the bitterest prosecutions that was ever waged in a criminal court—now complain that their testimony was reluctantly dragged from them. Having completely failed to sustain themselves before a legal tribunal, they insult the medical profession by attempting to sustain themselves before it by aspersions of their opponents, and by asserting that, although they may have failed to find tartar emetic at two post-mortems, they found it at a third, and have it now. Mr. Thomas proves them guilty of misrepresenting facts. At the trial twice they or their colleagues swore that they had found tartar emetic, but on cross-examination their mistake became painfully obvious. Remembering these things, how can we grant them credence now? Is it necessary to remind any one of the worthlessness of the scientific testimony of men so far committed?

After all is said and done in this controversy, one unquestionable fact remains: If Mrs. Wharton be guilty, Dr. Chew and his colleagues are guilty of a crime against society by destroying the evidence; if she be innocent, by their accusations they have committed an equally grave offence against her. One thing they may be well assured of,—*i.e.*, the world appreciates the fact that their zeal in bringing Mrs. Wharton to justice was equalled only by the ignorance which they displayed in the doing of it.

SEX IN EDUCATION, OR A FAIR CHANCE FOR THE GIRLS.

By EDWIN H. CLARKE, M.D., etc. J. R. Osgood & Co., Boston, 1873.

Many Americans remember with what amused curiosity they first glanced over the list of births in an English newspaper and wondered as to when it was, and how it was, that we as a people came to that definite degree of modesty which allowed us to publish marriages and to suppress the birth-announcements. For in fact there is in America a certain prudishness as to all such matters, so that women who are pregnant are led to conceal it, even if, as is often the case, they do not feel truly ashamed of fulfilling the functions of maternity. In England there is certainly less reserve as to mentioning that a woman is pregnant, or expects to be, or has been, confined. The same modishness has inter-

ferred with the frank admission of the relations of sex to business or professional life, and even to education. Hence it is that all sorts of absurd discussions upon these matters go on daily in our periodicals, with so little allusion to the sexual difference and its consequences that one might well suppose we were merely arguing upon the relative capacities of two tribes of males.

The book before us is an outspoken, manly statement, by a physician of the highest intelligence, as to one, at least, of these mooted subjects. It treats of the defects of our ways of dealing with the education of girls, and insists throughout, in the plainest language, upon the constant recognition in our homes and our schools, as well as in the business of life, of the fact that girls menstruate, and that, as the real purpose of women is to have healthy babies healthfully, so whatever interferes with these ends is wrong in principle,—cruel to the future woman, and impolitic as regards the race. This valuable little bit of plain speech had this origin. Dr. Clarke was asked to lecture to the Woman's Club in Boston; whereupon he spoke to its members certain truths, which stirred up so much talk and criticism that he was led to explain himself at large to the general public. If he be not accused of indecency and the like, we shall be pleasantly surprised. After a clever introduction, in which he laments the failure of our women, he treats next of the social customs and school habits which tend to injure them. Then comes the doctor's relation of the numerous cases which he has seen of women ruined by disregard of the facts of sex and its needs during the years of sexual evolution. Another chapter disposes of that peculiar American enormity,—co-education of the two sexes. This is a chapter which needs to be read in this city, where many estimable people believe in this plan of instruction. Lastly, Dr. Clarke indicates the better points in the European way of treating girls at the age of puberty; and this, too, is a piece of plain talk, which every mother should study with care.

After reading the well-weighed words of Dr. Clarke, his verdict as to the want of motherly watchfulness in America, his strictures on systems of education which bend to no laws of physiology, we shall wait with interest the replies which his book ought to provoke. Certainly no such rude attack, and none so efficient, has been yet made upon the modern plan of educating the two sexes together; nor has he by any means stated all of the objections which naturally arise in a physician's mind. It is, indeed, a subject ripe for discussion.

While giving the warmest praise to the motives which caused Dr. Clarke to write, and to the method and temper with which he has written, there is yet a single matter as to which we should like to add a few words.

Dr. Clarke charges that our women are needlessly unhealthy, and that they are only too often unfit to bear and nurse children; that this is owing to want of attention to the peculiar physiological laws of their sexual development; that this is the fault of their mothers on the one hand, and on the other that it is due to rigid methods of education, which develop the brain at the expense of the generative organs. All of this is true,—only too true; but Dr. Clarke in urging it should, we think, have asked himself whether climate, in its largest sense, has not something to do with the delicacy of our women. We believe that he would have been led to grant that a part of our troubles lies here, and in the fact that a perpetually changing race, renewed daily from Europe, is undergoing acclimation, and that there is every reason to hope that we are suffering in part from unavoidable and transient conditions. In other words, we should merely add to what Dr. Clarke has said, that the climate with its extremes, which make exercise so difficult, is, in that and

other ways, very trying to our young women. In saying this, we should merely be emphasizing what Dr. Clarke has so well stated, because, if in addition to the evils which can be avoided we have to admit others which cannot be, there is only the greater reason for keeping in view all the needs of the girl at her time of fullest sexual development.

S. W. M.

GLEANINGS FROM OUR EXCHANGES.

PHYSIOLOGICAL ACTION OF THEINE, CAFFEINE, COCAINE, THEOBROMINE, AND GUARANINE (*Edinburgh Medical Journal*, October, 1873).—It has hitherto been supposed and stated by many authors that theine and caffeine are inert substances, and that the physiological effects of tea and coffee are not due to these neutral principles, at all events in a state of isolation. From experiments conducted by himself, Dr. Alexander Bennett has arrived at the following conclusions:

1. The physiological actions of tea, coffee, guarana, coca, and cacao are mainly, if not entirely, due to their proximate principles.

2. Theine, caffeine, guaranine, cocaine, and theobromine are powerful poisons, inducing a series of symptoms affecting the nervous, respiratory, circulatory, vaso-motor, and glandular systems, and which terminate, if the dose be large enough, in death.

3. These five principles are to all appearances identical in physiological action.

4. In small doses, not ending fatally, they produce—1st, cerebral excitement not succeeded by coma; and 2d, partial loss of sensibility.

5. In large doses they produce—1st, cerebral excitement; 2d, complete paralysis of sensibility; 3d, tetanic spasms and convulsions; and 4th, death.

6. They paralyze the entire posterior columns of the spinal cord, also the entire system of peripheral sensory nerves; but the anterior columns of the cord, and the peripheral motor nerves, are not paralyzed.

7. They frequently produce convulsions of a clonic character, but occasionally they cause tetanic spasms, which latter are sometimes so severe as to cause opisthotonos. They do this, not by excitation of the reflex function, but probably by acting directly on the cord itself.

8. They do not produce muscular paralysis.

9. They at first increase, then impede, and lastly stop the respirations.

10. They at first increase, and finally diminish, both the force and frequency of the heart's contractions.

11. They produce at first contraction, and afterwards dilatation, of the capillaries and small blood-vessels, with stasis of the blood, indicating first irritation, and subsequently paralysis, of the vaso-motor nerves.

12. They affect the temperature by, 1st, slightly lowering, and, 2d, increasing it.

13. They usually produce contraction of the pupil.

14. They produce an increase of the salivary secretion.

15. They induce a peculiar form of tenesmus, accompanied by a copious discharge of clear mucus from the bowels.

Dr. Bennett gives diagrams of the respiration, pulsation, and temperature, with elaborate tables of the results of his experiments, and details the manner of their performance. The animals used were frogs, mice, cats, and rabbits.

AFRICAN CUSTOMS (*Le Progrès Médical*, August 30, 1873).—M. Henry Blanc, at a recent meeting of the French Association for the Advancement of Science, *à propos* of a communication on the physiological theory

of love, gave an account of some curious customs which prevail among certain African races.

The Somalis, who inhabit the plains along the north-east coast of Africa, practise the following operation. During the month subsequent to the birth of a female child, the labia minora, which are greatly developed in this race, are removed, leaving a large raw surface on each side. These surfaces are brought into contact and retained there by a bandage surrounding the abdomen and thighs. A piece of feather is inserted into the lower portion of the wound, so as to prevent the union of its edges at that point, and to permit later of the free escape of the catamenia. Until the age of ten or twelve years—the nubile epoch—is reached, the children are entirely nude, and it is impossible to perceive any trace of the genital organs, the union being always so perfect that the surrounding skin seems to pass from one thigh to the other with its continuity unbroken. At the time of marriage the bride is carefully examined by the parents of the groom, and the ceremony only takes place if the skin covering the vaginal orifice is thoroughly intact.

If the husband be young and vigorous, his conjugal approaches are usually sufficient to remove this obstacle; if not, he contrives to make a way for himself with the help of a sharp stone. The females are cold and experience no excitation during copulation.

The Abyssinians, who live on the elevated plateaux of the same region, circumcise their children the eighth day after birth. With the girls this operation consists in the ablation of the clitoris, the labia being left intact. Their women are highly lascivious, and seem to live only for sensuality. Their language is rich in expressions denoting the pleasures of physical love, and prostitutes are held in high esteem. Among the Somalis also, those women who, through the negligence of their parents, have not undergone the usual operation, become prostitutes and show themselves possessed of strong sexual passions. M. Blanc concludes, therefore, that these differences cannot be considered as attributable to race or climate, but that the seat of the pleasure experienced by the females during copulation must be in the labia minora, and not in the clitoris.

APHASIA (*Dublin Journal of Medical Science*, October, 1873).—Mr. James Martin was called to see a boy, aged six years, who had been complaining of right-sided frontal pain for about five days, and who had awakened after a short nap, entirely unable to sleep. He was perfectly sensible; pupils natural; tongue furred; temperature 100°; pulse 120; respiration 32; kidneys acting well. Two powders of calomel and jalap were given, and a mixture containing iodide, bromide, and bicarbonate of potassium was ordered, and taken for a week, at the end of which time he was quite well. The attack was peculiar from the readiness with which it yielded to treatment, and from its seat being on the right side.

ABSCCESS OF THE LARYNX SIMULATING CROUP (*Edinburgh Medical Journal*, October, 1873).—Dr. William Stephenson details three cases of abscess of the connective tissue in immediate relation to the larynx. In the first it occurred in a child, æt. 4, convalescent from scarlatina, and was attended with labored and stridulous breathing, cyanosis, dysphagia, and inability to lie down. Secondary lung-complications ensued, and the child died, the abscess, situated on the outer side of the right thyroid cartilage, being only discovered after death.

In the second, the child, æt. 2, was just recovering from an attack of smallpox: the symptoms were similar to those of the preceding case, the difficulty of breathing had lasted for a week, the child sat in an erect position in bed, and a small swelling was observed immediately

below the thyroid cartilage. It was opened, and three or four drachms of pus were withdrawn, with immediate relief to respiration. The child sank and died some days afterwards, from the weak cachectic condition induced by the disease.

In the third case, a child, æt. 18 months, the trouble began with a glandular swelling under the lower jaw, which disappeared in the course of a fortnight, and was followed by a fulness in the lower part of the neck, a slight displacement of the larynx to the right, and difficult respiration. These symptoms increased, until at the end of the second week a small rounded soft swelling could be felt about the level of the isthmus of the thyroid and at the outer margin of the sterno-hyoid muscle. This was opened, four ounces of pus were discharged, the urgent symptoms were at once relieved, and the case progressed steadily to complete recovery.

Dr. Stephenson remarks that the diagnostic symptoms of this affection are almost precisely those of retro-pharyngeal abscess. The more gradual onset of the laryngeal trouble as compared with croup, the pain and difficulty of deglutition, the paroxysms of dyspnoea which ensue on that act, and, lastly, the preference for and comparative relief obtained in the erect position, are all points of great importance, and are all characteristic of both post-pharyngeal and laryngeal abscess. They are markedly distinct from the symptoms of intra-laryngeal affections.

The author, in conclusion, gives a short *résumé* of a paper by Dr. Parry, on "Abscess of the Larynx in Young Children," published in this journal on the 14th of June, 1873.

EPITHELIAL CANCER OF THE COLON (*The American Practitioner*, November, 1873).—Dr. S. Littell reports the case of a man, aged 49, who died from a malignant affection of the mucous membrane of the intestine, which had resulted in perforation of the colon, the formation of an abscess between the peritoneum and the integuments, and the establishment of an artificial anus in the back, a few inches to the left of the spinal column, and at a point nearly on a line with the upper margin of the kidney.

THUMB-SUCKING.—I have observed that a peculiar and rather common deformity of the chest is caused by the habit of sucking the thumb in infancy and early childhood. The weight of the arm on the thorax of the child during sleep produces depression of the ribs in the line occupied by the arm when the thumb is placed in the mouth. As this is a very important effect of "thumb-sucking" never hitherto pointed out, I think it desirable to place this note on record for the benefit of other observers.—*Dr. Horace Dobell, in British Medical Journal*.

ELEPHANTIASIS—TREATMENT BY LIGATURE.—Dr. Manduel publishes, in the *Lyon Médical*, a *résumé* of all the cases of elephantiasis treated by ligature of the main artery of the affected part. This operation, introduced by Carnochan, of New York, has been performed twenty-three times,—viz., on the femoral artery fifteen times, on the external iliac three times, on the anterior tibial twice, on the two carotids once, the brachial once, and in one case the artery is not mentioned. The successful attendant upon the operation has been thus tabulated: one died of pyæmia; in two cases, a negative result; four were attended by a speedy relapse; six were relieved, and eleven cured. The number recorded as cured is probably inexact, inasmuch as patients suffering from this disease are exceedingly prone to a relapse, and require to be kept under observation several years before the degree of success can be estimated.

Compression, which has the advantage of being com-

paratively harmless, has succeeded in some cases. Du-four has reported several. Vanzette, of Padua, records a case of a young girl in whom the disease attacked the right leg. Complete success followed compression, and at the time the case was reported, three years afterwards, the patient remained perfectly well. Quite recently Gosselin attempted the same treatment, but without favorable result.—*New York Medical Journal*, November, 1873.

THE BLOOD IN YELLOW FEVER (*New York Medical Journal*, November, 1873).—Dr. Joseph Jones has found by careful and laborious observations that the changes which occur in the blood in yellow fever consist chiefly in—

1. Such an alteration of the chemical and physical properties of the fibrin and albumen as leads to the transudation of the latter through the excretory structures of the kidneys.

2. Various degrees of alteration and diminution, and in some cases almost entire disappearance, of the fibrin. Here we have an important explanation of the cause of the hemorrhagic tendency in yellow fever.

3. Peculiar and irregular changes in the form and size of the colored blood-corpuscles.

4. Increase of the extractive matters of the blood.

5. Increase of the fatty matters of the blood.

6. Accumulation of bile in the blood, giving a golden color to the serum, and probably accounting for much of the nausea, vomiting, and cardiac depression, as well as for some of the cerebral symptoms.

7. Accumulation of the urinary constituents, especially the urea, phosphoric acid, sulphuric acid, chloride of sodium, and carbonate of ammonium. The blood is alkaline, and contains ammonia, resulting from the decomposition of the urea.

8. Rapid dissolution of the colored corpuscles after the blood is abstracted from the body, either during life or after death.

9. Rapid putrefaction of the blood after its withdrawal from the living body, or from the large vessels after death.

ACUTE IDIOPATHIC GLOSSITIS (*Irish Hospital Gazette*, November 1, 1873).—Mr. Frederick W. Warren reports a case of glossitis occurring in a temperate man, thirty years of age, and preceded by headache, constipation, and dysphagia. After three days of these premonitory symptoms, his tongue became immensely swollen, filling the mouth, causing great pain in swallowing, and rendering the speech inarticulate. The submaxillary glands and the whole hyoid region participated in the inflammation. Two parallel longitudinal incisions were made along the dorsum of the tongue, one on each side of the median line; four leeches were applied under the lower jaw, and a powder of calomel and jalap was given. The next day he was much better, but, as there were still some tenderness and swelling around the hyoid region, six leeches were applied to the seat of pain. A senna mixture was ordered, to relieve the constipation which persisted. In two days he was almost well, and in a week was discharged, cured.*

STRYCHNIA-POISONING (*Boston Medical and Surgical Journal*, November 6, 1873).—Dr. G. W. Copeland reports the case of a middle-aged man who took five grains of strychnia with suicidal intent. He was seen an hour and a half later, suffering from frequent convulsions, with great opisthotonos, and unable to swallow or articulate. Twenty grains of sulphate of zinc failed to produce emesis, and inhalations of chloroform were resorted to and continued for eleven hours with excellent effect. The convulsions grew less severe and less frequent, and finally ceased altogether, and the case terminated in recovery.

MISCELLANY.

TOOTH-PICKS.—The tooth-pick is certainly a hygienic instrument. Hence its consideration is within the province of a medical journal; wherefore we abstract the following remarks of S. Phillips Day from a recent number of the *Food Journal*, for the edification of our readers. Mr. Day may be master of anathema,—may be a Beau Brummel in society,—but he certainly is wrong in asserting that the proper use of the tooth-pick is injurious to the teeth:

"The other day that public censor, *Punch*, laid his hand rather heavily upon those 'Savages in Clubs' who, dead to all feelings of delicacy, adopt the revolting and brutal practice of picking their teeth with sharp instruments while at table, and even in the presence of ladies. One can scarcely conceive a habit more ungentelemanly, offensive, and abominable. . . .

"The tooth-pick, or pick-tooth, is derived, it appears, from the *stecco* of the Italians, and likewise formed the crude idea from which the two-pronged fork was drawn. The instrument was unknown in England before Queen Elizabeth's reign. A few of the early dramatists make reference to it. Thus, in Ben Jonson's 'Every Man Out of his Humor' (act iv., sc. i.), Fallace, the Citizen's wife, cries:

"O, sweet Fastidious! O, fine courtier! How cleanly he wipes his spoon at every spoonful of white meat he eats, and what a neat case of pick-tooths he carries about him still!"

"From this passage critics consider that although Fastidious carried a bundle of wooden skewers sharply pointed about his person, nevertheless he did not use them to pick his teeth, but simply for the purpose of conveying solid food to his mouth, just as the Chinese make use of chop-sticks for the like purpose; that is, to serve in lieu of a fork. Court gallants also employed spoons to eat white meat. The tooth-picks were carried in neat cases and were regarded as gewgaws. Hence they were used ostentatiously at meals, and on other occasions, by way of distraction. Thus, Overbury, in his 'Characters,' observes of an 'Affectate Traveller' that 'his tooth-pick is a main part of his behavior,' clearly intimating that the shocking habit of picking the teeth had not then been in vogue. This is further confirmed by Shakspeare, who in his play of 'King John' (act i., sc. i.) makes Philip the Bastard observe:

"He and his tooth-pick at my worship's mess;
And when my knightly stomach is sufficed,
Why then I suck my teeth."

"The pernicious practice of picking the teeth manifestly must have come into use during Dryden's time. In one passage of his plays we alight on the following curt allusion:

"These are not dishes for thy dainty tooth:
What! hast thou got an ulcer in thy mouth?
Why stand'st thou picking?"

"Sandys observes, 'If tooth-picks of the lentisc be wanting, of a quill then make a tooth-pick.' Lentisc, according to an old writer on husbandry, is a beautiful evergreen, and made the best tooth-picks.

"Some persons in America are particularly addicted to the foul practice of using tooth-picks. In fact, not satisfied with the vigorous employment of such weapons during meals, they are said to carry them in their mouths out of the dining-room, and to keep digging at their teeth or else twirling them between their lips for an indefinite period. This is an amusement equal to 'whittling;' and 'a certain Yankee,' as has been incisively observed, 'can "whittle" a tooth-pick out of a pine log.'

"Nothing can well be more revolting to sensitive, cleanly persons than the habit of picking the teeth, either at meals or afterwards. The material of which the nasty instrument of torture is made, whether of wood or quill, does not render the practice less reprehensible. I lately observed in a shop-window in Holborn a box of pretty-looking 'diaphanous' tooth-picks imported from France; and it sorely grieved me to think that so much ornamentation should be bestowed upon such injurious articles. The use of tooth-picks should not be tolerated in civilized society, especially in what is termed 'good society.' Negroes do not need such things; then why should the white man? Savages can get on very well without such skewers; then why should Christians patronize them? Besides, they are highly injurious to the human teeth, creating apertures between them, destroying the delicate enamel which protects them, thus inducing premature decay. Therefore, both on the grounds of decency and health, the tooth-pick should be universally eschewed."

DEAF AND DUMB.—Dasent estimates that in Europe alone there are 200,000 afflicted in this way. In mountainous regions, as in Switzerland and Savoy, the proportion is very great. In the Berne Canton there is one to every 195 inhabitants; in Scotland, one to 196. In Great Britain, however, the proportion is only one in 1660; in Ireland, one in 1380. At the census in 1851, there were 12,553 deaf and dumb,—6884 male, 5669 female. They have increased in number during the last twenty years, the former still heading the list.—*British Medical Journal*.

At a meeting of the Anatomical Class of the Jefferson Medical College, Robert M. Hays was called to the Chair, and E. R. Lewis appointed Secretary.

The following preamble and resolution were unanimously adopted:

Whereas, the Anatomical Class of Dr. William H. Pancoast, and the students of the college generally, have heard of the great and irreparable loss which he has just sustained in the death of his beloved wife, who was personally known to many of us, and highly esteemed by all: therefore,

Resolved, That they hereby tender to him the expression of deep sorrow which they feel on this sad occasion. They wish also to assure their valued teacher, who has so thoroughly won the friendship and affection of his class, that they sympathize sincerely with him in his bereavement, and offer to him their sincere condolence.

JOHN V. SHORMAKER,	} Committee.
A. P. BRUBAKER,	
C. E. SAYLES,	
ROBERT MCCONAUGHY,	
D. R. MILLER.	

THE next Conversational Meeting of the Philadelphia County Medical Society will be held Wednesday, December 10, 1873, at 8 o'clock P.M., at the Hall of the College of Physicians. All regular practitioners of medicine in the city are cordially invited to attend these meetings. The subject

before the next meeting will be "The Use of Alcohol Medicinally and Socially." The introductory paper will be read by Dr. George Kert.

RETURN OF DEATHS AND INTERMENTS IN PHILADELPHIA FROM NOVEMBER 2 TO NOVEMBER 29, 1873.

DISEASES.	Adults.		DISEASES.	Adults.	
	Adults.	Minors.		Adults.	Minors.
Abscess.....	1	1	Fever, Malarial.....	2	...
Albuminuria.....	2	...	" Puerperal.....	4	...
Anæmia.....	1	...	" Remittent.....	...	2
Aneurism.....	1	...	" Scarlet.....	...	26
Apoplexy.....	18	1	" Typhoid.....	22	12
Asphyxia.....	1	4	" Typhus.....	2	1
Asthma.....	4	...	Fracture of the Skull.....	...	1
Burns and Scalds.....	5	...	Gout.....	1	...
Cancer.....	7	1	Heart Clot.....	1	...
" of Breast.....	3	...	Hemorrhage.....	3	...
" Face.....	1	...	" Lungs.....	3	...
" Liver.....	4	...	Hooping-Cough.....	...	2
" Stomach.....	6	...	Inanition.....	2	16
" Uterus.....	6	...	Inflammation of Bladder.....	2	...
Casualties.....	14	4	" Brain.....	3	6
Cerebro-Spinal Meningitis.....	2	2	" Bronchi.....	6	7
Cholera Infantum.....	...	5	" Ear.....	...	1
Cirrhosis of Liver.....	5	...	" Heart.....	1	1
Compression of Brain.....	...	1	" Kidneys.....	2	...
Congestion of Brain.....	13	12	" Larynx.....	1	3
" Liver.....	1	...	" Liver.....	7	...
" Lungs.....	9	5	" Lungs.....	27	15
Congestive Chill.....	...	1	" Peritoneum.....	10	2
Consumption of Bowels.....	1	...	" Pleura.....	1	...
" Lungs.....	165	19	" Stomach & Bowels.....	13	15
Convulsions.....	1	34	" Throat.....	...	1
" Puerperal.....	4	...	" Tonsils.....	...	2
Cramps.....	...	1	" Uterus.....	2	...
Croup.....	...	27	Intemperance.....	2	...
Cyanosis.....	...	4	Intussusception.....	...	1
Debauch.....	1	...	Leucocythæmia.....	1	...
Debility.....	28	25	Malformation.....	1	5
Diabetes.....	3	...	Mania a potu.....	1	...
Diarrhoea.....	3	3	Marasmus.....	...	32
Diphtheria.....	...	6	Measles.....	...	3
Disease of Brain.....	2	3	Murder.....	1	...
" Heart.....	28	2	Necrosis of Jaw.....	1	...
" Hip.....	1	1	Neuralgia.....	1	...
" Kidneys.....	12	...	" of the Heart.....	4	...
" Liver.....	3	...	Obstruction of Bowels.....	2	...
" Lungs.....	1	...	Old Age.....	42	...
Dropsy.....	11	3	Paralysis.....	19	...
" of Abdomen.....	1	1	Poisoning.....	1	...
" Brain.....	...	7	Pyæmia.....	2	...
" Chest.....	3	1	Scrofula.....	...	3
" Heart.....	3	1	Septicæmia.....	2	2
Drowned.....	3	...	Softening of Brain.....	10	2
Dysentery.....	...	1	Sore Mouth.....	...	1
Dyspepsia.....	...	1	Still-Born.....	...	66
Effusion on Brain.....	...	2	Suffocation.....	1	...
Emphysema.....	1	...	Suicide.....	4	...
Enlargement of Prostate.....	1	...	Teething.....	...	1
Epilepsy.....	1	...	Tetanus.....	...	3
Erysipelas.....	2	3	Tumors.....	1	1
Fatty Degene'n of Heart.....	2	...	Ulceration of Bowels.....	1	...
" Kidneys.....	1	...	Unknown.....	4	2
Fever, Catarrhal.....	...	3			
" Congestive.....	1	...			
TOTALS.....			603 419		

OFFICIAL LIST

OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U.S. ARMY, FROM NOVEMBER 25, 1873, TO DECEMBER 1, 1873, INCLUSIVE.

WOLVERTON, W. D., ASSISTANT-SURGEON.—Assigned to duty at Nashville, Tenn. S. O. 202, Department of the South, November 21, 1873.

GREENLEAF, C. R., ASSISTANT-SURGEON.—Assigned to duty at Huntsville, Ala. S. O. 202, c. s., Department of the South.

CALDWELL, D. G., ASSISTANT-SURGEON.—When relieved by Assistant-Surgeon Wolverton, to comply with War Department orders in his case. S. O. 202, c. s., Department of the South.

TAYLOR, M. K., ASSISTANT-SURGEON.—When relieved by Assistant-Surgeon Greenleaf, to comply with War Department orders in his case. S. O. 202, c. s., Department of the South.

KING, W. H., ASSISTANT-SURGEON.—Granted leave of absence for thirty days, with permission to leave limits of Department and apply at Division Headquarters for an extension of ten days. S. O. 204, Department of the South, November 26, 1873.

SATURDAY, DECEMBER 13, 1873.

ORIGINAL LECTURES.

CLINICAL LECTURE

ON THE MEDICAL TREATMENT OF GRAVEL AND CALCULI.

BY JAMES TYSON, M.D.,

Clinical Lecturer on Microscopy, Urinary Chemistry, and Renal Diseases in the University of Pennsylvania.

Delivered September 26, 1873.

IN a previous lecture I asked your attention to the formation of urinary calculi, and the method for determining their composition,—means so simple and easy of application that they should be familiar to every practitioner. To-day we will discuss the treatment of the condition incident to their presence and the tendency to their formation. None of you who have witnessed a case of nephritic colic need be impressed with the importance of being able to relieve the painful symptoms of this condition, or, still better, if possible, to prevent their occurrence.

The treatment naturally resolves itself into the *preventive*, the *solvent*, and that required during a *paroxysm* of nephritic colic. A hasty conclusion would seem to require that the latter two should be identical; but, when we come to consider the efficiency of the solvent treatment, we will soon discover that it is far too slow in its action to be relied upon when pain so severe as that caused by impaction of a stone is to be relieved.

I. Suppose, then, you are called upon to treat a patient in the agonies of nephritic colic, so called. Under these circumstances a small stone is supposed to have left the pelvis of the kidney and to be working its way through the long but narrow ureter, whose diameter is not greater than that of an ordinary knitting-needle, if as great. The evidence of such an attack is discovered in a degree of pain which is seldom surpassed in severity, and which, starting in the lumbar region, extends thence along the line of the corresponding ureter and groin to the testicle, which is often retracted. It is scarcely possible to mistake the import of such pain; and very likely the patient, from his experience in one or more previous attacks, will himself have made the diagnosis.

At this stage the composition of the stone is not of material importance. To relieve the pain is the urgent demand. Happily, means are at our disposal promptly to do this. A hypodermic injection of the one-sixth of a grain of sulphate of morphia, followed by hot poultices constantly kept up, will generally so far influence the pain as to give you at least a breathing-spell in which to prepare yourselves for further action. Suppositories containing one-half grain of extract of opium or a grain of powdered opium, with one-half grain of extract of belladonna, should be ordered, with directions that one shall be introduced into the rectum every three hours. A

more frequent use will scarcely be of further service, since not more than the quantity named is likely to be absorbed in this time. A hot bath may also be suggested in case relief is not obtained, and the hypodermic injection may be repeated, if necessary, at the next visit.

A specimen of urine should be obtained, if possible, before the second visit, and examined microscopically. In a certain number of cases no information whatever will be derived from it. In others, again, you will promptly detect crystals of uric acid, sometimes large enough to be seen with the naked eye, in the shape of the so-called "red-pepper" grains; in others the microscope will detect octahedra and dumb-bells of the oxalate of lime. In the former instance you have a uric acid calculus to deal with; in the latter probably a small stone of oxalate of lime, though not necessarily, since a deposit of crystals of oxalate of lime sometimes attends uric acid concretion; but the probabilities of the oxalate composition will be greatly increased if the crystals, whether octahedra or dumb-bells, tend to aggregate themselves, thus forming *microscopic calculi*. Whenever this has been the case, and I have subsequently obtained the stone for analysis, I have invariably found it to be composed of oxalate of lime. Phosphatic calculi are rarely the occasion of nephritic colic, since they are never found as primary stones in the kidney, nor indeed in the bladder; but are subsequently added to previous nuclei of whatever composition, in consequence of an alkaline reaction induced either in the whole mass of the urine or that immediately around the calculus, as the result of which the triple phosphates and phosphate of lime are deposited in consecutive layers.

Should such examination of the urine lead to a conclusion that the offending stone is uric acid, large doses of citrate of potash may be administered in connection with the anodyne treatment, partly in application of the principle to be presently explained in connection with the solvent treatment, and partly with the hope that by flushing the kidney with water the concretion may be pushed onward towards the bladder. If the calculus be oxalate of lime, such treatment can only be justified by the latter motive, since to hope for its solution is futile.

Should the patient become nauseated in the course of the above treatment, you may assure him that such a result is really desirable, since the increased pain is often due to a spasm of the muscular coat of the ureter, as the result of which the stone is more closely grasped, while the condition of relaxation due to the nausea may aid in interrupting the spasm, and thus relieve the pain.

Supposing the attack terminated, the stone has either reached the bladder, or, having established a temporary tolerance in some part of the ureter, remains quiescent for a time. In the former case it will probably be passed by the urethra, and, for the discovery of it, careful examination should be made; while in the latter it will inevitably excite another attack at some period more or less near.

II. It is with a view to dislodging such, as well as aiding in the escape of other stones which may be resting in the pelvis of the kidney, that the *solvent* treatment is used. By means of carefully conducted experiments by Dr. Roberts, of Manchester, England, author of the very useful practical book on "Urinary and Renal Diseases," we have arrived at quite accurate knowledge of our powers in this direction.

In the first place, however, let us recall the composition of renal calculi. For practical purposes it may be stated that three-fifths of all stones in the bladder have been found to be composed of uric acid or its compounds, two-fifths of phosphatic combinations, and three or four per cent. of oxalate of lime. But I have already said that phosphatic stones of small size rarely, if ever, exist in the pelvis of the kidney. It is only when calculi have reached considerable size, so that by partial occlusion of the ureter the urine has become backed towards the kidney, and in consequence of its accumulation has acquired, through decomposition, a change in its reaction, that the phosphatic laminæ are deposited, and at this stage curative medical treatment is totally out of the question. Indeed, it has been proven that the nuclei of almost all calculi which have commenced their formation in the pelvis of the kidney are composed of uric acid or oxalate of lime; and in a large number of calculi composed of uric acid there is found to be an oxalate of lime nucleus.

The solvent treatment, therefore, resolves itself into attempts to dissolve calculi of oxalate of lime or uric acid and its compounds. The general method of Dr. Roberts was to allow alkaline solutions to flow over stones soluble in alkalies,—that is, uric acid, urates, and cystine (a very rare concretion),—at a rate simulating that at which urine is supposed to trickle down from the kidney through the ureter; while acid solutions were caused to flow over those found soluble in acids, *i.e.*, oxalates and phosphates. The result of these observations proved that it is not impossible to produce some effect upon uric acid; that all attempts to dissolve oxalate of lime or mulberry calculus are futile; and that, although phosphatic concretions are susceptible to the action of acid solutions, the practical impossibility of producing through the system a sufficient degree of acidity of urine restricts the application of the principle to injecting the bladder with such solutions, with a view to acting upon phosphatic stones in that situation.

From this we learn that there is only reasonable possibility of acting upon uric acid and cystine with a view to diminishing their size by solution. The experiments of Dr. Roberts have also informed us what alkaline salts are most useful for this purpose. In the first place, he has shown that the potash salts are more efficient than the soda salts, and, secondly, that of these the carbonates are the most active. But it is well known that the citrates, acetates, and tartrates become converted into carbonates by the time they reach the kidney, or at least are eliminated as such; and in these we have preparations very much more agreeable, as well as more soluble

and better borne by the stomach, than the carbonates themselves. They become, therefore, the most suitable remedies to administer; and perhaps the citrate is to be preferred,—especially if no purgative action be required; but the acetate may be interchangeably used. Of these salts of the vegetable acids forty to fifty grains may be given every three hours, freely diluted, say in three to four ounces of water, with lemon or other vegetable syrup added, if desired, to flavor: about six drachms of the salt should be taken by an adult in twenty-four hours. Of course liquor potassæ and the bicarbonate of potash come under the same category; so also the lithia salts; but there is considerable difference of opinion as to the efficiency of the latter, some vaunting them very highly, while others declare them inactive on account of their sparing solubility, and I have not had sufficient experience with them to be justified in giving an opinion.

Some interesting facts, with which you should be familiar, were developed by Dr. Roberts as to the strength of the solvent solutions employed, since upon them is based the appropriate dose of the remedies. Thus, it was found that a strength of less than forty to sixty grains of the bicarbonate to the imperial pint was very much more feeble, while, on the other hand, solutions containing more than sixty grains to the pint exhibited also a diminution in solvent power, which was finally arrested by the formation of a white crust of alkaline *bi-urate* on the surface of the calculus. With a solution of eighty grains to the pint this bi-urate crust was loose and easily detached, like a layer of whitewash; but with a solution of one hundred and twenty grains to the pint it was tenaciously adherent, and very little dissolution took place with carbonate of potash, and none at all with carbonate of soda. With solutions of one hundred and sixty and two hundred and forty grains to the pint, there was no loss of weight with potash or soda; the fragments of stone became invested with a thin tough coating of bi-urate, resembling white paint, which put a stop to all solvent action.* The quantities of the vegetable salts above mentioned, and in the manner described, have been found by Dr. Roberts to produce the degree of alkalescence required; and he found further that when urine alkalized by the internal administration of these salts was passed over the surface of uric acid calculi at blood heat, the calculi underwent solution at the *mean rate of twelve and a half grains in twenty-four hours*. Such an exhibit at least merits a trial, and, as far as my experience goes, the trial has been justified by the results.

The treatment should be kept up for a considerable length of time, but should be discontinued when an ammoniacal state of the urine is developed, since under this condition solution ceases, while on the other hand a deposition of mixed phosphates (triple phosphate of ammonia and magnesia and amorphous phosphate of lime) takes place on the surface of the calculus, and it of course becomes larger. The simple presence of amorphous phosphates,

* Roberts's Urinary and Renal Diseases, p. 240, first American edition. Philadelphia, 1866.

however, which are often observed, particularly after a meal, need be no contra-indication, since they do not interfere with solution and are not disposed to concretion. It is the ammoniacal state which is to be avoided. An interruption of the treatment should be enjoined at such times until the urine again becomes acid.

Such is the solvent treatment of uric acid gravel; and, if it be clearly borne in mind what alone is claimed for it, a power of partial solution or diminution in size of small calculi, so that they may more readily pass through channels ordinarily much too contracted for them, and not the destruction of large stones already in the bladder, there need be no disappointment in its results. A stone in the bladder of considerable size should be turned over to the surgeon, who with his knife or lithotrite will make quick work of it.

You may perhaps wonder why I have said nothing about Vichy or other alkaline waters, which have not only had so much reputation in dissolving uric acid stone, but have also been used with such reckless indiscriminatio in all calculous disease, without regard to composition or indication. I have purposely made them secondary, because I believe them to be very much less efficient than the alkaline citrates and acetates of potash, while they are more expensive and difficult of access. And in this I am only following the precept of one whose great experience in these maladies entitles him beyond all others to our respect,—Sir Henry Thompson, who twenty years ago declared the "citrate and carbonates of potash are more potent and certain than Vichy water," and who says, so recently as 1873, "I have never at any time prescribed Vichy water for any urinary affection* on the ground of its inferiority to the potash solutions." I think the citrate may be fairly said to be the salt which of all others offers the best chance of success; and this by common consent of all who have examined the subject." Compared with such authority as this, confirmed by the carefully conducted experiments of Dr. Roberts, my own testimony to the same end is of little value, except that it adds one more to the list of those "who have examined the subject." I might say of the Vichy water that the alkali which it contains is the carbonate of soda, and not of potash, and of the former salt there are forty-seven grains to the English pint.

III. But if much may be expected from the solvent treatment of gravel, more may be expected from the *preventive* plan. Here also, for the reasons already stated, it becomes practically the preventive treatment of *uric* acid concretion and its congeners. And although it is the case that oxalate of lime calculi are quite insoluble in the solutions efficient in dissolving uric acid, and indeed in the system in any solutions, it happens that the circumstances attending their production are almost identical with those attending the formation of uric acid, and that the preventive treatment of the

latter becomes therefore the preventive treatment of oxalate of lime.

What, then, are the indications for the use of this treatment, by which we hope to prevent the formation of stone in the urinary passages? It is well known that urates, uric acid, and oxalate of lime crystals are occasionally found in the urine of individuals who are perfectly healthy. And you will many times be called upon to dispel the illusion based upon the appearance of "sediment" in the urine of a patient who is rendered unnecessarily wretched by that fact, and who is really in perfect health.

These deposits are apt to appear in urine, sometimes in considerable quantity, not only after an attack of indigestion, but also from defective assimilation even without symptoms of indigestion, and by whatever cause induced, whether from gross disregard of the proprieties of eating, or the use of a single glass of wine to which one has not been accustomed. And oxalate of lime crystals are almost always found in the urine after a meal of vegetables containing oxalic acid, as of sorrel, tomatoes, or rhubarb. I have often told you that when I wish to obtain examples of the octahedra of oxalate of lime, for examination with the microscope, I always secure a good crop in my own urine by eating a full meal of the rhubarb or pie-plant, if it be in season; in a few hours after which, my urine is loaded with beautiful crystals of large size. I also know a medical gentleman who is unable to eat tomatoes, because of the crystals of oxalate of lime which appear in his urine and give him pain in their descent to the bladder.

How, then, are you to determine the presence of the so-called "uric acid diathesis"? In the first place, by the persistence of the deposit, which is usually pinkish in hue, or gives to the urine a cloudy appearance which is dissipated by heat. And here I must again caution you against a deposit which always takes place when urine is cooled much below the temperature of the blood. The urates in health are usually present in the urine in such quantity that they are dissolved at the temperature of the body,—that of the urine when it is passed,—or even at a temperature somewhat lower. In cold weather, therefore, when the urine becomes cooled much below that point, a deposit inevitably takes place, which is usually found made up of the amorphous mixed urates of potash, soda, lime, and magnesia, and is physiological.

If, however, having observed the precautions suggested by the above facts, the deposit persists day after day, and you find upon inquiry, as you will be very likely to, that the patient's father or grandfather had attacks of "gravel" (for the affection is very constantly hereditary), you may conclude that you have a case of uric acid gravel. Or if the patient or his ancestors have had gout, you may be equally confident; because this is also well determined, that uric acid gravel and gout are identical in their causation. For, in addition to the fact that the gouty deposits in the joints are made up of mixed urates generally crystallized in acicular form, we have numerous cases in which an attack of

* The Preventive Treatment of Calculous Disease, p. 58, Lindsay & Blakiston, Philadelphia, 1873.

gout alternates with one of uric acid, or one member of a family has gout and another uric acid gravel. Indeed, gouty patients almost always have deposits of urates and uric acid in their urine. Finally, I need only allude to the inference you may draw if the patient has already suffered an attack of nephritic colic.

Supposing the presence of such a condition determined, how will you manage it in order to prevent the final great evils, renal calculi or stone in the bladder? Here, as elsewhere, the foundation of a correct treatment must be a knowledge of its pathology. And what is the pathology of uric acid, and I may say also of oxalate of lime deposits? With one universal accord the persistent presence of these deposits in the urine is admitted to be indicative of deficient assimilation. From some cause or other, food which should be worked up into completely soluble substances stops short at principles which are most insoluble, and which, therefore, are deposited, in the crystalline shape alluded to, in the tubules of the kidney and pelvis of the organ, where they act as foreign bodies, causing irritation and pain, and in their aggregation form the calculi the transit of which to the kidney causes so much suffering. Attending this condition is often found a so-called torpor of the liver and bowels,—that is, a condition which, whatever its true nature, is attended with deficient excretion into the alimentary canal.

Under these circumstances the kidney is already overworked in its attempt to remove from the blood these insoluble and irritating substances, and the indication is to relieve it by throwing the work, or a part of it, on some other organ. It is not sufficient to administer Vichy water or other alkaline substances, which by dissolving the uric acid and urates simply hide the enemy without preventing its presence. Such a course is aptly compared by Sir Henry Thompson to that of the fabled ostrich which is said to bury its head in the sand when pursued, and believes itself secure because it no longer sees its enemy. There may be, it is true, palliation of symptoms by such treatment, and the patient may be for the time relieved as well as comforted by the fact that he no longer *sees* the deposits, but they will often return when the remedies are discontinued.

This is, of course, admitting a purely *chemical* action of alkalis in promoting the solution of uric acid; but it is too sweeping an assertion with regard to the valuable citrates, tartrates, and acetates previously alluded to, which have been shown by Drs. D. Campbell Black, Basham, and Geo. Harley to have something more than an action of this kind, and to possess also, when administered, an important *physiological* action through which the oxidation processes of the economy are much increased, so as to transform the slightly soluble uric acid into the highly soluble urea,—apparently through an increased activity of all the digestive functions. Nor is this effect overlooked by Thompson, who alludes to it in claiming the superior efficiency of the citrates and tartrates over Vichy and similar carbonated waters.

If, however, it is possible to divert some of the work of the kidney to another channel, and thus relieve an organ already overworked, it is much better at least to superadd and sometimes, perhaps, to substitute such treatment. This may be accomplished by acting upon the liver and bowels,—organs which in their combined action are quite as important excretors as the kidney. Few who have had experience in these cases have not seen the advantage of a mercurial purge at night, followed by a saline the following morning. The constant use of these means, however, would be impossible, for evident reasons, and others must be sought, in application of the same principle of complementary elimination. Such means are afforded in the natural *saline* purgative waters, for the general introduction of which we are also largely indebted to Sir Henry Thompson. These have for their chief ingredients sulphate of soda and sulphate of magnesia, and are represented by the Püllna, Friedrichshalle, Marienbad, Carlsbad, and Franzenbad Springs in Germany. The Püllna waters contain about one hundred and fifty-four grains of sulphate of soda and one hundred and sixteen grains of sulphate of magnesia to the English pint; those of Friedrichshalle, fifty-eight grains and forty-nine grains, respectively; those of Marienbad, forty-eight grains of sulphate of soda, none of magnesia, nine grains of *carbonate* of soda, and a little iron. The Carlsbad contain twenty-five grains of sulphate of soda, no magnesia, and thirteen grains of carbonate of soda; the Franzenbad, thirty grains of sulphate of soda, no magnesia, six grains of carbonate of soda, and a little iron. In contrast with these, Vichy contains but three grains of sulphate of soda, no magnesia, forty-seven grains of carbonate of soda, and a little iron, to the pint; and Vals, none of the former two, but sixty-five grains of carbonate of soda, with a little iron. The latter are, therefore, as already stated, simply strong solutions of carbonate of soda.

Of these waters, that to which Sir Henry Thompson gives the preference, and that upon which my own experience has been based, is the Friedrichshalle, the Püllna having been found to purge too freely and to produce griping. Of the Friedrichshalle about eight ounces or an ordinary tumblerful may be given every morning about an hour before breakfast. This is usually followed after breakfast by one or two full copious stools, produced by about twenty-five grains of sulphate of soda and twenty of sulphate of magnesia,—quantities which if dispensed from the shops or even by evaporating the proper amount of the natural water would probably have no effect whatever, though the latter would still be more efficient than the salts as ordinarily obtained. Thus there will be seen to be some peculiar efficacy in the natural waters, the cause of which is not precisely known. This treatment should be kept up for three weeks to a month, and after a short intermission be returned to. In continuing the treatment, there will be found this important advantage, that, instead of having to increase the quantity each day, it may be diminished, while the effect will still continue, so that by a gradual reduction, at the end of three weeks, four ounces will

have as much effect as eight at the outset. It is occasionally of advantage to precede the treatment by a small dose of blue pill,—three to four grains; this, if digestion be deranged, the appetite bad, and the tongue foul. Sir Henry Thompson also recommends the use of five ounces of hot water in connection with the eight or reduced amount of the Friedrichshalle; but I have found patients complain of discomfort evidently due to a distention of the stomach when this dose is administered. When it can be borne, additional effect may reasonably be expected from the dilution as well as the increased temperature, since in both these respects it is made to approach the character of the water at the spring, which is hot and less concentrated than that which is exported. The increase in temperature may also be obtained by placing the glass of water in a second vessel containing hot water.

You may wish to know precisely the plan of the eminent English surgeon. It is to administer the Friedrichshalle as above directed for one, two, or three weeks, according to the nature of the case and results, and then to combine with three or four ounces of it five or six of the Carlsbad, which you will recollect contains twenty-five grains of the sulphate of soda and thirteen of the carbonate to the pint; it is therefore more alkaline. To this combination he adds three or four ounces of hot water. After giving this for two or three weeks, six, seven, or eight ounces of hot Carlsbad are given alone for another fortnight. This course may be repeated once in three or four months, if necessary, while in the mean time, as an occasional aperient and corrector of digestion, he knows nothing at all equal to Friedrichshalle, leaving the patient, as a rule, less constipated than he was before. With a very much less experience, of course, but having examined the subject with considerable care, and having lost no opportunity of testing the plan, it has seemed to me we can do much more for these cases than formerly.

Should the Friedrichshalle prove insufficient in some cases, the Püllna may be substituted as a more powerful water, containing, as it does, nearly two and one-half drachms of sulphate of soda and nearly two drachms of sulphate of magnesia to the pint.

These waters, including Püllna, Friedrichshalle, and Carlsbad, are now easily obtained in this country, being largely imported by a Philadelphia firm. I must say, however, that the various salts of these waters advertised for sale as the "Carlsbad salt," "Püllna salt," etc., are no substitute for the natural waters, having very little more virtue than the same quantity of salts obtained from other sources.

The expense of obtaining these waters in this country will doubtless be an obstacle to your ordering them for some patients. I have therefore taken some trouble to find out which of the numerous American spring waters correspond or approach them in composition. Most prominent among these I find the waters of Crab Orchard Springs, located at Crab Orchard, Lincoln County, Kentucky. These waters contain 7 grains of sulphate of soda, and 25.6 grains of sulphate of magnesia, to the pint. From these are derived by evaporation the cele-

brated Crab Orchard salts, whose superiority over the ordinary Epsom salts is well known. These contain 63.19 parts of sulphate of magnesia, 4.20 parts of sulphate of soda, with smaller quantities of sulphate of potash and lime, in 100. Besides being less irritating than Epsom salts, they possess the advantage claimed for Friedrichshalle of not requiring the daily quantity necessary for an effect (at first a drachm freely diluted) to be increased. The Estill Springs, located in Estill County, Kentucky, furnish thirty-three grains of sulphate of magnesia to the pint; but no sulphate of soda is named in the analysis of Dr. Robert Peter, which I find in Walton's Treatise on the Mineral Springs of the United States and Canada.

The well-known Bedford Spring waters at Bedford, Pennsylvania, also belong to this class, though containing but ten grains of sulphate of magnesia to the pint. They are also chalybeate, and are said to resemble the Franzenbad waters of Bohemia, to which we have referred; but the latter contain thirty grains of sulphate of soda to the pint, while the Bedford contain but ten grains of sulphate of magnesia. The beautiful location of Bedford, in connection with the undoubted medicinal value of its waters, renders it a very popular summer resort. I may add that "gravel" and "calculus" are among the ills for which Bedford water has long claimed efficiency. The numerous Saratoga springs contain almost none of these valuable ingredients, but pre-eminently chlorides and carbonates. Thus much of information, and something more, you should have of American spring waters, in order that you may intelligently advise those who consult you with regard to them. It is not unlikely that the skepticism with which American physicians have hitherto regarded the medicinal effects of spring waters has been, in part at least, due to our ignorance of their actual qualities, and that we are, therefore, in a measure responsible for their having largely fallen into the hands of empirics. Much valuable information may be found in the volume above alluded to, and one or two others recently issued from the American press.

There is one more point in connection with the preventive treatment of calculous diseases to which I must call your attention, and that is diet. I have already alluded to the effect of certain vegetables, as the rhubarb or pie-plant, tomato, and sorrel, in promptly producing crystalline deposits of oxalate of lime. By persons, therefore, inclined to oxalate of lime concretions, these should be avoided. There is also reason to believe that potable waters charged with the salts of lime increase the tendency to the formation of oxalate of lime calculi. To the same end, fatty matters, saccharine substances, and those containing sugar or readily converted into it, as sweet fruits, together with alcoholic drinks, should be omitted by those subject to uric acid deposits; the use of these matters increasing the work of the liver, and, with it, the vicarious action of the kidneys. While the use of a purely nitrogenous diet is, for the same reason, to be avoided, and the free use of vegetables, regarding the exceptions named, to be recommended, total abstinence from animal food is not

necessary or desirable. Nor need tea and coffee be interdicted, these substances having been shown to diminish the formation of uric acid and increase that of urea, acting, therefore, like the citrates, acetates, and tartrates. Quinine, digitalis, atropine, and cod-liver oil are placed in the same category,—diminishing the formation of uric acid and urea as well,—and may be used in connection with the previous treatment as the patient's condition or special circumstances may require.

ORIGINAL COMMUNICATIONS.

MALIGNANT DISEASE OF THE EAR, WITH PARALYSIS OF SOME OF THE CRANIAL NERVES.

BY GEORGE C. HARLAN, M.D.,

Ophthalmic and Aural Surgeon to the Children's Hospital.

E. C., three years of age, was brought to the dispensary of the Children's Hospital to be treated for a disease of the left ear. She had had scarlet fever a year before, and had not been in good health since. About three months before, she had become restless, slept badly, and seemed in pain, and within two months attention was for the first time called to the ear by a slight bloody discharge. Soon after this it was noticed that she had pain in swallowing, that the parts about the ear were swollen, and that the face was drawn to the right side when the child cried. Her appetite failed, and she became very feeble.

At the time of examination, August 4, there was a slight amount of thick purulent discharge in the meatus, on removing which, a large, firm, rounded polypus, the size of a pea, or larger, was found blocking up the meatus. There was a fluctuating swelling beneath and behind the auricle. When the polypus was removed, by means of Wilde's snare and the rectangular forceps, there was a considerable discharge of sanious pus, increased by pressure on the external swelling. A free incision of the external swelling gave exit to a copious discharge of offensive pus. No dead bone could be detected by the probe. The left side of the face was swollen and puffy, and the mouth much distorted to the right side in crying. The left eye was never closed, even in sleep. The conjunctiva was free from congestion, the pupil movable, and the cornea clear and bright. There had been a convergent squint of the right eye of long standing, but the mother said this was increased, and the left eye was also inverted. The left half of the tongue was much swollen and rough, in strong contrast to the right, which was normal.

August 8.—The polypus had grown again nearly to its former size, and was again removed by forceps without pain and with only a few drops of blood.

August 20.—The polypus had grown again to its former size. The incision behind the ear, which had been kept open with difficulty by tents, was now gaping, and a fungous growth appearing in it.

On August 29 the polypus had become strangulated and sloughed off, and the external tumor had grown to the size of a walnut. There was a free discharge of healthy pus by the side of the tumor.

The upper lid was now immovable, and nearly closed, the conjunctiva injected, and the cornea dimmed.

September 1.—The tumor had increased to the size of a hen's egg. It was lobulated and had a bright-red granular surface.

The upper lid was now quite closed; the conjunctiva

was much congested, and the whole cornea was hazy and its lower fourth infiltrated. The convergent squint had nearly disappeared. There was a free sanious discharge from the *right* nostril.

September 17.—There was a penetrating ulcer of the cornea with protrusion of the iris: as the patient's mother aptly expressed it, "the eye seemed to be melting away."

September 21.—The child was breathing with difficulty through the mouth and the right nostril, which was much dilated and expanding and contracting laboriously.

She died September 25, apparently of exhaustion. No post-mortem examination was permitted beyond the removal of the tumor. The bone at its base was found roughened and eroded.

The tumor was exhibited to the Pathological Society and pronounced by the Committee on Morbid Growths to be a round-celled sarcoma.

The chief points of interest in this case are afforded by the nerves involved in the disease.

Such extensive destruction of the walls of the tympanum could not well occur without affecting the portio dura in its passage through the aqueduct of Fallopius, and causing the complete facial paralysis which appeared among the earliest symptoms. The difficulty of breathing was evidently much increased by the loss of the respiratory action of the left nostril, and the excessive action of the right nostril was painfully apparent. It is known that section of both facial nerves in the horse will cause the animal's death from suffocation; and we may well suppose that so young a child would find greater difficulty than an adult in breathing through the mouth.

Paralysis of the sixth nerve increased the convergent strabismus, which was corrected and the ball rendered immovable when the disease extended to the third.

The levator palpebræ was at the same time involved, and the eye, which had been held widely open in consequence of paralysis of the orbicularis, was now closed by falling of the lid.

The inflammation of the conjunctiva and cornea which appeared at this time presented a typical case of neuro-paralytic ophthalmia, without doubt due to paralysis of the fifth, or of its ophthalmic branch, and a point of special interest is the fact that the destructive inflammation of the cornea did not commence until after the ptosis had completely closed the eye. This excludes the theory that the affection of the cornea in such cases is always due to the mechanical injury of external irritants of whose presence the eye has been rendered unconscious. Though much weakened of late, and by some now abandoned, this theory was at one time generally admitted to be well established. Soelberg Wells speaks of it as "uncontrovertibly proved by the experiments of Snellen and others."

The free muco-sanious discharge from the right nostril was a singular phenomenon, no other symptom of nerve-lesion having appeared on that side. An increased discharge from the nostril of the affected side has been noted by experimental physiologists after section of the fifth nerve, but there was no excessive secretion from the left nostril in this case.

A similar increase of nasal secretion on the side opposite to the injury is noted in a case of injury to the sympathetic nerve in the neck, reported by J. F. Payne (St. Thomas's Hospital Reports, vol. iii., new series).

There is a bare possibility that the hypertrophy of the left side of the tongue might have been congenital. But this does not seem likely, as it was so marked that it scarcely could have escaped notice, and the child was otherwise perfectly symmetrical. Though the chorda tympani was necessarily, and the gustatory probably, involved, I am not aware that either paralysis or irritation of either of these nerves has been known to produce such a result.

The nervousness and peevishness of the little sufferer, who cried whenever I came near her, rendered it impossible to test the smell or taste, or even the general sensation.

NOTES ON SKIN-GRAFTING IN INDOLENT ULCER; ALSO, ON RETAINING DRESSINGS IN ORCHITIS.

BY ALFRED C. GIRARD, M.D.,

Assistant-Surgeon, U.S.A.

CORPORAL —, 1st Artillery, reported sick with an indolent ulcer on the inner surface of the right leg, close to the tibia, and four inches below the knee. Had been in hospital the preceding year with the same complaint on the same spot. Apparently no constitutional disease; slight varicosity and signs of stagnation in the veins of the ankle. The ulcer was almost circular, had a diameter of three inches, and presented the usual appearance, with particularly hard, elevated, and ragged edges. Cauterization, poulticing, and strapping were tried for two weeks, without the slightest change being produced, when I determined on trying skin-grafting, which I had once found quite useful in the treatment of a large syphilitic ulcer involving the whole of the ankle. I excised two small pieces of skin of the size of a millet-seed from the abdomen, and laid them on some of the irregular granulations in the centre of the ulcer. In six hours, as if by magic, the bottom of the sore appeared raised, the edges lost their callous appearance, and the next morning—twenty-four hours after application of the grafts—cicatrical tissue commenced bridging over the space between them and the edges. In one place, however, where the edge was undermined and ragged, farthest from the grafts, no change had taken place; and I applied a third graft in its vicinity with equally satisfactory results. In seven days the ulcer was entirely cicatrized without other treatment.

I may as well mention here an appliance which has given me great satisfaction in the treatment of gonorrhœal orchitis. Every physician knows the annoyance caused by the usual strapping with adhesive plaster in this complaint: the dressing is either too tight, and consequently very painful to the patient, or else loose, and then useless. In either case it has to be removed frequently, causing

much labor to the dresser and pain to the patient. I therefore tried the "*elastic bands*" which are furnished the army for stationery, imprisoning at first the testicle with the smallest size, and selecting for the compression such sizes as could be well borne by the patient. I thereby secured *constant, easy, and painless* compression; the dressings could readily be changed for any purpose, and admitted of other local treatment if found desirable. This mode of treatment has proved very successful.

NOTES OF HOSPITAL PRACTICE.

JEFFERSON MEDICAL COLLEGE.

CLINIC OF PROF. S. D. GROSS, M.D.

Reported by JOHN B. ROBERTS.

AMPUTATION OF THE LEG ON ACCOUNT OF CARIES OF THE ANKLE.

THIS boy was struck upon the ankle with a stone, nine years ago; which injury, acting as an exciting cause, has been followed, in a child of the scrofulous diathesis, by caries of the tarsal bones, as is proved by the probe introduced into any of these sinuses leading to the joint.

The disease is so extensive that excision of the ankle-joint and amputation at the inferior third of the leg are the only procedures worthy of consideration. In the main, amputation is the more expedient in these cases, since it can be done with very little risk to life, and is less likely to be followed by erysipelas and violent inflammation than excision; which latter operation at best gives a shortened limb and an ankylosed joint. Nevertheless, as it is doubtful how much of the tarsus is involved in this instance, I shall endeavor to resect, hoping that the disease is limited to the articular surfaces of the joint. If, however, it is found impossible to remove all the carious bone by this means, it will then, as an attempt to preserve the foot has been made, be proper to amputate through the leg.

A curvilinear incision having been made over the outer side of the foot, the tendons of the peroneal muscles are separated from the fibula, that they may not be divided by the saw, and the periosteum carefully detached, in order to favor as far as possible the subsequent production of bony material. After the ligamentous connections on this side have been severed, another incision is made on the internal aspect of the foot, and the tissues separated in a similar manner. The next steps in the operation are to saw off the external malleolus, and to bend the foot outward, causing the extremity of the tibia to protrude at the wound on the inner side of the ankle. The soft tissues are detached from this bony surface with great care, to avoid injury to the tibial arteries, and the articular portion of the bone is sawn off as high up as the caries extends; after which the astragalus and all the other tarsal bones that are diseased must be removed by the gouge and chisel.

Upon a critical examination of the condition of the tarsus, however, the disease is found to have invaded the bones to so great a degree that the preservation of the foot by exsection of the joint is rendered impossible, and it will therefore be necessary to perform amputation above the ankle.

In order to prevent hemorrhage during this operation, the femoral artery is controlled by digital compression, which is applied just where the vessel emerges from under Poupart's ligament; for in that situation it lies di-

rectly over the margin of the acetabulum and the head of the femur, so that the current of blood be arrested by a moderate degree of pressure against the hard bony surface.

The circular operation is a method well adapted for amputation of the lower portion of the leg, and will therefore be employed in this instance. The integument, having been divided by a long knife carried rapidly around the limb, is dissected from the underlying muscular structures, and turned backwards like the cuff of a coat; which eversion can be facilitated by making a vertical incision on the side of the flap. After this procedure the muscles are incised on a level with the retracted cutaneous flap, and, having been previously separated from the bones, are drawn back by a retractor in order to permit the application of the saw some distance above the joint where the muscles have been divided. In performing this step of the operation, it is important to saw through the fibula first, since it is the smaller bone, and would probably be splintered if left until the tibia had been divided, and to take care to inflict as little injury as possible upon the periosteum, for the danger of necrosis is in proportion to the extent of laceration that this membrane suffers. Hemorrhage is arrested by ligation of the anterior and posterior tibial and interosseous arteries, the edges of the flap brought together by sutures, and the wound dressed with an oiled compress retained by means of adhesive strips.

On dissection of this foot which has been removed, it is found that the calcaneum and all the other bones of the tarsus, as well as the proximal extremities of the metatarsal bones, are carious. This proves conclusively that excision of the ankle would not have been advisable in this instance; for the impossibility of removing such an extent of carious bone with a prospect of bringing the healthy portions into apposition is sufficiently apparent.

EPITHELIOMA OF THE FOREARM—REMOVAL OF THE DISEASE BY AMPUTATION OF THE ARM.

Henry M., aged 31 years, had, when a child, his right forearm crushed in a grist-mill, without, however, any injury being done to the bones. The wound did not heal, but took on epithelial disease, and now, twenty-three years since the receipt of the original injury, the entire forearm is a mass of epithelial cancer, which, having first attacked the skin, has, during its progress, invaded the deeper tissues of the limb, rendering amputation of the arm necessary for the removal of the disease.

Its removal is certainly demanded, for the patient is subject to frequent and copious hemorrhages from the diseased structures, which have rendered him exceedingly feeble, and, if continued, may lead to a fatal issue. It is probable that there is also encephaloid disease present here, for epithelioma is prone in its later stages to assume this character; which form likewise makes its appearance quite frequently at the cicatrix left after the removal of an epithelial cancer.

This man's arm from the elbow to the wrist is one enormous, unhealthy-looking, fungating ulcer, and discharges a thin sanious fluid; while the hand is swollen and greatly distorted by the involvement of the muscles of the forearm in the ulceration.

Epithelioma, canceroid, or epithelial cancer, as the affection is variously denominated, most frequently attacks the lower lip, the tongue, the anus, the rectum, the vagina, and similar mucous and cutaneous structures, but is not limited to these tissues, for it is occasionally found invading also the muscles and bones. Its cause is not understood, though not infrequently it is traumatic, as in the present instance, and in a case where I amputated in this room at the shoul-

der-joint, on account of a large epithelial ulcer originating in the scar of a burn received a number of years previously. The affection is slow in growth, and usually begins as a tubercle or warty excrescence, which subsequently, assuming ulcerative action, extends in every direction, often committing frightful ravages upon the surrounding parts, and sparing in its progress not even bone or cartilage. The pain accompanying the disease is lancinating, and frequently very severe, resembling in a marked degree the characteristic pain experienced in the progress of scirrhus.

The only operation to be performed for the removal of the morbid growth in this case is amputation of the arm about midway between the elbow and shoulder, which will be done by the flap method. In amputation by this method the flaps may be formed by transfixion of the limb and cutting outwards, or by carrying the knife from the external surface inwards towards the bone: the former of these is the preferable and more expeditious mode of operating in the arm and thigh.

This long amputating-knife is therefore pushed through the tissues from one side of the limb to the other, in close contact with the bone, and carried downwards until sufficient length has been given to the flap, which is finally completed by turning the edge of the knife and bringing it to the surface in such a manner as not to form a thin narrow extremity. Then the internal flap is made in a similar manner, and, the brachial artery having been seized by an assistant as soon as it is severed, both flaps are retracted by the same assistant, in order to allow the knife to be carried around the humerus, to divide the periosteum and any remaining muscular fibres, and to permit the application of the saw. When the limb is very muscular, it is advisable to retrench the flaps by removing slices of the muscles, for this manipulation gives a more seemly stump and renders it better for the adaptation of an artificial limb. The arteries are now ligated, having been previously isolated so that nothing but the vessel itself is included within the ligature, and the nerves are drawn out and cut off high up, in order to prevent the occurrence of neuralgia and neuromata that might be produced by pressure upon their divided extremities.

The wound will be left exposed to the air for a couple of hours, until the surface becomes glazed, and then the edges of the flaps will be brought into apposition by sutures and narrow adhesive strips; but no dressing other than this will be applied, because by causing the retention of the fluids secreted it might interfere with the process of cure.

NEW TEST FOR ALBUMEN (Boston Medical and Surgical Journal, October 23, 1873).—Picric acid has been recommended as a test for albumen. If a drop of the fluid to be examined be allowed to fall into picric acid, it sinks through, and, if albumen be present, leaves a white streak. Dr. Bowditch has found that two drops of egg-albumen added to 20 c. c. of urine gave a slight reaction with heat, a distinct one with nitric acid, but none with picric acid, and that on increasing the quantity to four drops only a feeble reaction was obtained.

CHILBLAINS.—Mr. Fergus recommends sulphurous acid in this affection. It should be applied with a camel's-hair brush, or by means of a spray-producer. One application of this usually effects a cure. The acid should be used pure. A good wash for hands or feet affected with chilblains is sulphurous acid, three parts; glycerin, one part; and water, one part. The acid will be found particularly useful in the irritating, tormenting stage of chilblains.—Druggist's Circular.

PHILADELPHIA

MEDICAL TIMES.

A WEEKLY JOURNAL OF

MEDICAL AND SURGICAL SCIENCE.

The Philadelphia Medical Times is an independent journal, devoted to no ends or interests whatever but those common to all who cultivate the science of medicine. Its columns are open to all those who wish to express their views on any subject coming within its legitimate sphere.

We invite contributions, reports of cases, notes and queries, medical news, and whatever may tend to increase the value of our pages.

All communications must bear the name of the sender (whether the name is to be published or not), and should be addressed to Editor Philadelphia Medical Times, care of the Publishers.

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EDITORIAL.

WHITHER ARE WE DRIFTING?

TO say exactly how low the American medical profession is to be sunk in the eyes of the people by the exhibitions offered in our courts of justice would require the voice of the prophet; but to perceive that we are sinking day by day lower and lower needs no "second-sight." Not long since, we heard a prominent lawyer in this State assert that he could get some doctor or doctors to swear to anything. Of course we contradicted, but of course we felt that there was a large measure of truth in what he said. It was with a sense of real shame that we awaited some taunting reply to our denial, expecting to be asked to reconcile the positive statements of the chief medical witness in the McFarland defence with his precisely opposite and equally positive printed opinions in regard to emotional insanity. Fortunately, our legal opponent was not so well posted as he might have been.

The Stokes-Fisk case has closed, and, amid the rush of events, under the shadow of the trials of the prince of plunderers and his followers, will soon be merely a matter of history to the general public. Unfortunately, the medical testimony given at the trial will be no less a matter of history. Seven doctors, most of them men of the highest rank in the profession, having attended the wounded Fisk during his lifetime, were at the trial confronted by Professors in medical colleges, by physicians supposed by the people to be representative, swearing with greater or less positiveness that not Stokes but

the doctors killed Fisk,—not the pistol but the hypodermic syringe sped the fatal bullet. Really, to see our exalted cotemporary the *New York Medical Record* searching around to find the reason that the profession is sinking so in public esteem, whilst such scenes are enacted before it, seems to us quite amusing.

Still more recently come tidings from the far West of similar degradation. This time it is not life, but property, that is at stake. It seems that a gentleman completed ten days before his death a will which showed that he called to mind all the members of his family, various persons to whom he had become attached, and several purposes which he had strongly favored during life. It was proven beyond cavil that there was a reason for every one of his numerous bequests, such as was compatible with complete soundness of mind; that he was ten days in making the will; that he continued to speak of its dispositions afterwards for several days; and that no one of the several persons about him—physicians, personal friends, one or two clergymen, and the drawer of the will—observed the slightest wandering at any time, or any remark "sounding to folly."

Yet some eight or nine doctors, including one Professor, were found who testified that the man was incapable of making a judicial will; that he must have lost, at the time of the completion of the instrument in question, all power of conscious and continuous thought; that he must have been incapable of transacting any business whatever. Why? Because carbon must have been retained in his blood!—since he had died of some pulmonary disease, and at post-mortem examination the lungs were found to have lost, through induration, two-thirds of their breathing-capacity.

WE do not believe that doctors are often dishonest in their statements on the witness-stand; but we do believe they are not rarely culpable in assuming the possession of knowledge that they do not have, and sometimes lend themselves, unconsciously, to the suppression of a part of the truth. The surroundings of medico-legal practice in our American courts are excessively bad. The specious pleading of lawyers, the demands of sympathy, the grinding force of an active public opinion, the chance of a notoriety which weak minds sometimes mistake for fame, the temptations of large fees, are of such power as to be resisted only by those strong not only in moral integrity, but also in their personal knowledge that they have studied the subject to the bottom. Yet

we have known prominent practitioners of medicine, ignorant of medical jurisprudence or of the subject under consideration, "cramming themselves" for an opinion which should turn the scales of justice when life itself hung in the balance.

In what way it is to be achieved we confess we do not exactly see, but, unless we are willing to share the public opprobrium which the present customs are rapidly producing, something must be done to create among us medical jurists, and to have some law or general medical opinion that shall prevent ignorant men, or wise men ignorant of the especial subject, from disgracing the profession on the witness-stand.

A PSYCHOLOGICAL PHENOMENON.

TO those of our readers who are fond of psychological studies the present article is addressed. Once, when serving as *interne* in a hospital under Prof. Gross, our learned chief said, "Give this patient so-and-so." "The man came in yesterday, and I ordered that for him then," was the reply. Quickly came back the answer, "You see, doctor, great minds flow in the same channel." Our psychological curiosity is on the same wise.

Most of our readers will no doubt remember our editorial of November 8 on Professional Advertisements. Curiously enough, the editor of the *Chicago Medical Examiner*, in the issue of that journal for November 15, discourses upon a similar topic, and still more curiously do his sentences run parallel with ours, as is witnessed by the following paragraphs:

"It has been freely asserted that the established physicians who constitute the Council, desiring to maintain the undisputed possession of their respective cocklofts, have kicked away the ladder up which they have climbed. One 'medicus' asserts that to stop advertising his books would 'retard his advance in practice ten years, and keep him starving,' and pointedly calls attention to the fact that the works of Mr. Curling, President of the College, have been advertised to such an extent as to make Curling and testis household words in the community, and consequently to establish their author. Another correspondent alludes pleasantly to the circumstance that the London *Lancet*, which has strenuously upheld the Council, placards the railway stations with the titles of communications on 'Tumors of the Womb,' 'Rectum,' and other subjects generally supposed not to offer edifying reading for mixed companies of ladies and gentlemen."—*Philadelphia Medical Times*.

"It is claimed by some that the established physicians, who constitute the council, desiring to maintain undisputed possession of their respective cocklofts, have kicked away the ladder up which they have climbed. One 'Medicus' asserts that to stop advertising his books would 'retard his advance in practice ten years, and keep him starving;' and pointedly calls attention to the fact that the works of Mr. Carling (*sic*), president of the college, have been advertised to such an extent as to make Carling (*sic*) and testis household words in the community, and consequently to establish their author. Another correspondent alludes pleasantly to the circumstance that the London *Lancet*, which has strenuously upheld the council, placards the railway stations with the titles of communications on 'Tumors of the Womb,' 'Rectum,' and other subjects generally supposed not to offer edifying reading for mixed companies of ladies and gentlemen."—*Medical Examiner*.

We commend this to the attention of all students of psychology, of all collectors of coincidences. We explain it by the wise saying of Prof. Gross, and warm our "*amour-propre*" with the inevitable deduction.

THE case of operation for *aneurism* by Dr. Levis, which we have editorially commented on once or twice, terminated fatally. Dr. Levis has promised us a full report of it.

The case of *ovariotomy* reported some little time ago as part of Professor Gross's clinic also had a fatal termination.

CORRESPONDENCE.

LONDON LETTER.

[From Our Own Correspondent.]

Esmarch's Bloodless Method of Operating—The Art of Gargling in the Larynx—Hospitalism—Intended Discussion at the Clinical Society of London—Sir Henry Holland—His Fortune—His Funeral—The Court Appointments—Dr. Burrows—Dr. Sieveking.

LONDON, November 14, 1873.

A GREAT deal of interest has been excited among metropolitan surgeons by the introduction here of an improved method of preventing hemorrhage in surgical operations, known as Esmarch's bloodless method. It has been introduced by Professor Esmarch, of Kiel, the well-known son-in-law of Stromeyer, and one of those careful, exact, and able observers, every one of whose publications is always worthy of careful study. Esmarch's method is so great an improvement on all previous efforts in the same direction, of which there have, of course, been many, as to be entitled to be considered an invention of the highest surgical importance. Of course many surgeons have endeavored, by systematically elevating a limb before operating on it, to empty it of blood, as well as so to restrict the access of blood by pressure on the main arterial trunks as to reduce the shock by loss of blood to a minimum; but the success has always been more or less imperfect. By the adoption of Esmarch's method the loss of blood is reduced to insignificance; and, what is hardly less important, operations on the limbs requiring careful dissection are performed with as little embarrassment from hemorrhage as if the surgeon were actually engaged on the dead subject. The method has been very extensively tried here. It was first described in the *London Medical Record*, from the data of Esmarch, Billroth, and Meissel, by Mr. William MacCormac of St. Thomas's Hospital, who at the same time announced his successful application of the method; and subsequently in the same journal (No. 42, October 22) a full translation was given of a lecture published in *Volkmann's Sammlung*, in which the whole method and its applications are fully discussed. It has come into very general use here in consequence, and is so absolutely free (as far as hitherto observed) from any bad conse-

quences and so fertile in advantages that it seems likely to take at once a permanent place among surgical procedures.

The mode of proceeding is graphically described by Esmarch himself, as follows:

"While the patient is being chloroformed, we wrap the leg in waterproof varnished tissue-paper, so that the pus from the sinuses may not soil the bandages; then, with these elastic bandages, made of india-rubber webbing, we envelop each leg from the tips of the toes to above the knee, and, by equal compression, force the blood out of the vessels of the limb. Immediately above the knee, where the bandage ends, we apply this piece of india-rubber tubing four or five times round the thigh, drawing it very tight, and fastening the hooks which you see at one end to the brass rings at the other. The india-rubber tubing compresses all the soft parts, including the arteries, so completely that not a drop of blood can pass into the part which has been tied off. It has this advantage over all tourniquets, that you can apply it to any part of the limb, and need not give yourself any trouble about the position of the principal artery. Even in the most muscular and fattest individuals, you can perfectly control the flow of blood in this simple way.

"We now remove the india-rubber bandage which was first applied, and the varnished paper lying under it; and you see that both legs, below the compressing tube, perfectly resemble the legs of a corpse, presenting in their pale color an almost dismal contrast with the rosy hue of the remaining parts of the surface. You will see, too, that the operation will be in all respects like one on a dead body."

By employing this method, exploratory proceedings to ascertain the extent of disease before deciding finally the variety of operation to be performed (excision, partial excision, amputation) are much facilitated. The whole matter is one of great interest, and is sure to attract the attention of surgeons throughout the world, who will, no doubt, succeed in improving on the results of Professor Esmarch.

Another foreign physician has endeavored to interest us by demonstrating on his own person very effectually the fact that by a modification of the method of gargling it is perfectly easy to introduce the fluids employed into the larynx, and to fill the supraglottic cavity of the larynx completely, so that the white vocal cords may be seen firmly contracted below the liquid, shining through it and bathed in it as to their upper surfaces. The common fallacy is to suppose that the epiglottis so guards the larynx that no fluid enters it. M. Guinier not only demonstrates the opposite truth, but shows how laryngeal gargling may be erected into a regular therapeutic method. His directions for introducing gargles into the larynx are,—

1. Slightly to raise the head.
2. To open the mouth moderately.
3. To protrude the chin and the lower jaw.
4. To phonate the diphthong *æ* (in the highest upper notes).

He asserts that he finds little trouble in teaching his patients at the baths of Cauterets to adopt this method of gargling, and that by doing this and *not* throwing back the head, none of the gargle is swallowed. What is quite certain is that Dr. Guinier himself has acquired the art in the most perfect manner, and goes through half an hour of gargling, demonstrating with the laryngoscope, with the greatest ease and without experiencing any annoyance. But practice certainly counts for much in such a performance. Singers and persons of some intelligence could, no doubt, without much difficulty, acquire this method of gargling; and for many singers, clergymen, and others, it is an art probably quite worth cultivating. But it is not given, I imagine, to every one to "gargle in his larynx," and certainly to few to accomplish the process with so much evident enjoyment as this enthusiastic physician.

The discussion on hospital statistics continues, and is, as I predicted, widening its area. The two former assistants of Sir James Y. Simpson, Dr. Lauchlan Aitken and Mr. Lawson Tait, are entering the field in defence of his statistics relating to hospitalism, but only with the effect of materially weakening such authenticity as formerly attached to the documents. Mr. Tait reveals the unexpected fact that one at least of these was altogether a forgery. He promises, however, to publish the whole of the original documents in a volume. This will have the effect of showing whence they were derived, and how far they cover a complete field, or represent the selected results of surgeons whose cases were so favorable as to make them anxious to publish them; but it will not remove the objection that they do not represent the absolute mortality of any one district, and especially not of any old town district. Mr. Prescott Hewitt intends, I hear, to arrange a "field-day" on the subject at the Clinical Society of London, of which he is President, for the purpose of inducing the leading surgeons of London to follow an example which he proposes to it, of stating the amount of "hospital disease" prevailing, in their experience, after operations in private houses, a converse side of the question well worth discussing, and which will throw a great deal of light upon the points at issue. Meanwhile Mr. Erichsen, who opened the fire by his introductory address, in which he quoted, endorsed, and pointed the moral of Simpson's charges against hospitals and hospital surgeons, is somewhat in trouble. The committee of University College are a little anxious at the unnecessary loss of life to which he points: they have called upon their surgical staff to assume whatever may be their share of responsibility in the matter; and so Mr. Erichsen will have to settle as to the facts with his colleagues, and as to the conclusions with his committee. He is quite strong enough and skilful enough to steer through the storm which he has raised, and the result can but be beneficial to science.

Sir Henry Holland leaves a fortune amounting to £9000 a year to his children. He died full of honors and of friends; and yet it must be mentioned, as a satire upon the gratitude and affection of the great, that this

eminent physician, to whom more than one generation of great persons are deeply indebted for various good offices, was carried to the grave almost unattended, except by his immediate family. For more than thirty years Sir Henry had been but little seen in professional circles, and was personally almost unknown to more than a very few of the present race of metropolitan physicians. He had interested himself but little in professional affairs. It is not surprising, therefore, that few medical men followed him to the grave. He was buried almost before they were aware that he had passed away. But it is not a little surprising that his wide circle of friends among the greatest personages cared so little to show a last mark of respect to his remains.

His death left vacant the court office (a nominal one) of physician to the Queen. This has been filled by the appointment of the existing President of the College of Physicians, Dr. Burrows. As a sort of consolation to Dr. Sieveking, who has been slightly treated by the Prince of Wales, and has never had the solid benefits of his nominal position as physician to the Prince and Princess, he has now been promoted to the honorary office of extraordinary physician to the Queen, vacated by Dr. Burrows. These are all paper appointments, and rather raise a smile than confer any solid distinction. The actual attendant of the Prince is Sir William Gull, and of the Queen, Sir William Jenner; while to fill Sir William Jenner's place when he is unable to attend, Dr. Wilson Fox and Dr. Marshall have been appointed to the household offices. There is always a good deal of hollowness about court appointments, and not unfrequently, as has been the case with Dr. Sieveking, they lead to humiliation and annoyance rather than to any real advantage. Many London physicians think that they might with advantage be dispensed with.

THE PREVENTION OF LOSS OF BLOOD IN SURGICAL OPERATIONS.

TO THE EDITOR OF THE PHILADELPHIA MEDICAL TIMES:

IN looking, a few days ago, over the *Medical Times* of November 22, I read with great avidity your extract from the *British Medical Journal* of October 25, concerning the mode of preventing the loss of blood in surgical operations, as enunciated and practised by Professor Esmarch, of Kiel. I had, however, not read very far before I found myself in contact with an old acquaintance, and then it occurred to me, what we all have seen so often in print, that history repeats itself, not only in politics, in statesmanship, and in the arts and sciences, but above all, and in a most wonderful manner, in our own profession. It is seldom that one picks up a medical journal which does not contain some startling novelty as old as the hills, set forth with all the enthusiasm of a grand discovery, the happy sciolist never dreaming that he was announcing, perhaps for the fortieth time, what had long been forgotten, or, more properly speaking, what so few had learned and appreciated when first put in print, in so decided and

positive a manner that he who runs may read. It is to this class of professional men that the sentiment of Seneca applies with peculiar force, determined, as they seemingly are, that their knowledge shall shine before the world with a special lustre: "*Qui sibi amicus est, scito hunc amicum omnibus esse.*"

I had not proceeded very far in the perusal of the lecture of the distinguished Professor of Kiel, when I said to myself, "Here is a broad field upon which the medical teachers, hospital surgeons, and medical editors of the United States may display their knowledge before their pupils and their readers, certainly for the next twelve months, if not for a much longer period." I inwardly congratulated them upon having fallen upon something that was really new, and likely, for a time at least, to take the place of the carbolic acid dressing and other miraculous procedures. I was not disappointed. Already the journals of this and other countries come to us loaded with the praises of the "new method of preventing hemorrhage in surgical operations," and, as a natural consequence, the name of Esmarch is upon the tongue of every physician and student. Esmarch, always a man of progress, has covered himself with glory; like Byron, he woke up one morning and found himself famous; and already our countrymen are prepared to contribute largely towards the erection of a statue in honor of the man who has achieved this wonderful discovery,—a discovery before which that of the ligature by Ambrose Paré and that of acupressure by Sir James Y. Simpson literally blanch and fade into insignificance. Only the other day, as I was credibly informed, one of our hospital surgeons, one of the most dexterous and beautiful operators in this goodly city, astonished his pupils and his learned confrères by cutting off a thigh for a poor fellow with the aid of this "preventive method" with hardly any loss of blood; and so thoroughly saturated is the medical mind, at this moment, in Philadelphia medical circles, with this wonderful discovery that no other topic is tolerated. The moment a man utters the words "carbolic acid," alludes to the latest improvement in the obstetric forceps, or hints at the best and safest method of securing the pedicle in ovariectomy, the offending individual is at once coughed down, pronounced an old fogey, or silenced by the cry, "Hear, hear, hear!" Now and then you may hear one, more bold than the rest, scream out, in a voice and tone that might charm Mahomet, "There is but one God, and Esmarch is his prophet." In Europe the same enthusiasm prevails. The medical journals everywhere speak of the "preventive method" as one of the greatest triumphs of the age, as a most astounding discovery. A surgeon of one of the great London hospitals, writing to one of his confrères in this city, gravely asks him whether he has made himself familiar with this mode of preventing hemorrhage in surgical operations, adding that it is regarded with the greatest favor by all his colleagues, and that everybody is making it the theme of conversation, of discussion, and of merited praise.

This "new method," as every reader of the *Times*

knows, simply consists in pressing the blood out of the part to be operated on, while it is held at a right angle with the body, and preventing its return until the knife has done its work. The patient being brought under the influence of chloroform, a bandage of india-rubber webbing is drawn tightly round the limb from its distal extremity upward, when the parts immediately above are firmly constricted with a piece of india-rubber tubing cast four or five times around the limb, the ends being secured together by hooks and chains. The elastic webbing being next removed, the operation is proceeded with, hardly any loss of blood following.

In a case of necrosis of both legs, described at length, in which this process was employed, the Professor and his assistant operated simultaneously upon the two limbs, the flow of blood from each bone hardly amounting to a teaspoonful, and the man, we are told, at his own request left the hospital on the twenty-first day.

The method of treatment here briefly described is, as the German Professor kindly informs us, applicable only to the extremities, and to the penis and the scrotum. Obviously, it is not adapted to operations upon the head, neck, or trunk; although he has suggested that advantage might be derived from encircling, as a preliminary step, one or more of the limbs with elastic tubing, so as to retain a store of blood in them, to be used in case of emergency from exhaustion by allowing the blood to re-enter the circulation.

"There is nothing new under the sun," is a saying as old as it is true. This mode of preventing hemorrhage in surgical operations is certainly no novelty in this country, whatever it may be on the other side of the Atlantic. We have heard within the last few days a surgeon of large experience declare that he had employed it upwards of thirty years ago; and in the first edition of Professor Gross's *System of Surgery*, published in 1859, vol. i. p. 663, the author, in speaking of amputations, gives, among others, the following instructions: "A third assistant takes charge of the tourniquet, but before applying it care is taken to empty the superficial veins by raising the limb and pressing it from above downwards; or, instead of this, the limb is *tightly* bandaged just before the operation. Such a precaution, however, is only of *material* moment when the patient is very feeble, and therefore ill able to bear the loss of blood."

In the above short sentence is obviously comprised, as if in a nutshell, the whole of this new and much-vaunted method of preventing hemorrhage in surgical operations. Professor Gross does not describe the procedure as a novelty, but as one so well known as not to require any special emphasis or illustration. He had not only repeatedly employed it himself in hospital and private practice, but he had witnessed its happy effects in the hands of others so repeatedly that it had ceased to impress him as a novelty when he indited the above sentences.

The German Professor presses out the blood, and then applies a gum-elastic bandage and encircles the limb with four or five turns of india-rubber tubing.

It may be asked, What is the difference whether the roller, when *tightly* applied, is an ordinary bandage or a gum-elastic one? Has not an ordinary roller, when tightly applied to a limb, and its effects have not been properly watched, often caused gangrene from the arrest of the blood in the arteries and veins, deep as well as superficial? Is there any difference in the circular constriction of a limb when made with a tourniquet or india-rubber tubing? There may be magic in elastic material thus used, which an ordinary plodding mortal may not have sense enough to perceive or to appreciate. If there is any actual difference, it is the difference between "tweedle-dum and tweedle-dee."

As was stated before, we shall hear much of this new method of preventing hemorrhage within the next year or two. The medical journals will teem with accounts of it. Numerous modifications will soon be suggested, as so many pegs to hang a little notoriety upon. Many will strive to excel in this particular direction, and not a few will regret that the method cannot be applied with safety to the "encephalic extremity," the contents of which will be not a little puzzled and perplexed in the approaching lucubrations and controversies. It is easy to foresee that the "carbolic acid treatment" will for a time be thrown into the shade, and that many wonderful things now agitating the professional mind will be swallowed up by the new method of preventing hemorrhage in surgical operations. The wounds left after operations thus performed will, we shall no doubt be told, always unite by the first intention; erysipelas and pyæmia—those frightful enemies of the human race—will no longer torment our patients; and the life of many a poor sufferer will be greatly prolonged by this astounding transatlantic discovery.

UNGUIS.

GLEANINGS FROM OUR EXCHANGES.

DEATH FROM CHLOROFORM IN BOSTON.—On November 10, in Boston, a lady to whom Dr. Eastham, a practising dentist, was administering an anæsthetic, suddenly expired. The following report of the circumstances of the case, and of the coroner's inquest, is condensed from the *Boston Medical and Surgical Journal* for November 20 and 27:

Dr. Eastham testified that the deceased had been his patient for twelve or fourteen years, during which time he had on several occasions given her anæsthetics, chloroform, ether, and gas, both separately and in combination.

On the forenoon of November 10, she came to his office for the purpose of having a tooth extracted, and insisted upon taking ether. He made a mixture of chloroform and ether, containing less than half chloroform by volume, poured about a teaspoonful on a cup-sponge, and began the administration, first holding the sponge a little distance from the nose, and then moving it nearer. After she had breathed it for two or three minutes (or, according to the same witness at a later stage of his examination, from a minute to a minute and a half), he told her he was about to proceed. She shook her head, as if to say that she was not ready, but he took hold of the tooth and extracted it, during which operation she straightened back, groaned, and screamed

a little, as if in pain, and afterwards went into a sort of hysterics and became rigid. At this point he did not notice her lips or try her pulse, but observed that her eyes were set wide open, like those of one in a spasm. He seized a napkin moistened with water and gave her a splash on the forehead; she seemed to revive, and a flush came over her face, upon which he sat her up and applied ammonia-water to her nose. Her dress was then loosened, but as she became pale again he sent out for assistance. Another dentist arriving, they proceeded to undo her corsets and rub her spine, continuing the application of strong ammonia. During this time, about fifteen minutes, she was sitting up in the chair; but as soon as a physician had been procured she was removed to the waiting-room and laid down, but she had then stopped breathing; artificial respiration was employed, and a battery was used until it was evident that she was past all restoration. This witness testified in addition that there are two peculiar and perfectly distinct shades from the use of anæsthetics, one for faintness and one for sick stomach, and that he thought the pallor in this case was of the former variety. He never felt the pulse while producing anæsthesia, but watched the temporal artery. He did not consider that chloroform, if given on a sponge with plenty of fresh air, was any more dangerous than ether, but supposed it would decompose the blood more quickly; had not fully anæsthetized her, because he considered her to be somewhat lacking in vitality; does not feel any anxiety when about to administer ether, chloroform, or the mixture; preferred the latter, because the patients are not so noisy or excited under its influence; used Squibb's chloroform, and Powers & Weightman's ether.

A friend of the deceased testified that two days before her death the latter appeared in excellent health, that she had never known her to complain of trouble in her heart, that she dressed loosely, and was not then nursing her child.

A lady who had accompanied the deceased to the dentist's confirmed Dr. Eastham's account: she had insisted on taking ether, but nothing was said about chloroform.

Dr. Osgood, the dentist who came when assistance was sent for, testified that he found her sitting in the chair, inclined forwards; her corsets were quite tightly laced; he could not detect any pulse or respiration, and believes she was dead at the time of his arrival.

Dr. R. H. Fitz, Pathologist to the Massachusetts General Hospital, read his account of the autopsy, made twenty-one hours after death. Rigidity was well marked; skull-cap and dura mater normal; longitudinal veins empty; moderate amount of blood in the veins of the arachnoid. Blood-vessels at the base of the brain contained but little blood; cerebral substance firm, with much less blood than usual. Heart and aorta unusually small; the cavities containing dark fluid blood of no unusual color or odor. Lungs of a bluish-red color; the posterior dependent portion quite dark; tissue contained air, and a somewhat increased amount of blood; no special degree of œdema; kidneys, liver, and uterus normal, but with rather more blood than usual. The examination gave no evidence of recent disease of any of the organs, or of chronic alterations sufficient to account for death; the fluid condition of the blood, its diminution in the brain, and its increase in the thoracic and abdominal viscera were abnormal, and might have been the result of various causes; the diminished size of the heart and aorta was probably of congenital origin. The blood is found liquid after death in cases of asphyxia, of poison from certain gases, and of some very malignant forms of disease in which decomposition is extremely rapid.

Dr. E. S. Wood, acting Professor of Chemistry at the Harvard Medical School, gave an account of his analysis of the anæsthetic used. The odor resembled that of ether mixed with chloroform, the latter being strongly perceptible. Its specific gravity was 1.043, which corresponds to that of a mixture of six parts by bulk of ether with four of chloroform, if allowance be made for an increase in the density of the two when mixed. The liquid answered to the tests both for chloroform and ether; it contained no hydrochloric or acetic acid, and no chlorine, showing that both the ether and chloroform were free from any deleterious ingredients, a small amount of alcohol only existing as an impurity.

The witness stated that the only statistics he had seen relative to the mortality occasioned by the use of ether or chloroform, or a combination of the two, were some which were published in Chicago in 1870, and which were copied into the last annual report on the practice of pharmacy and toxicology. Roughly, the proportion of deaths to cases in ether was one in twenty-five thousand; to cases in chloroform, one in twenty-five hundred; to cases of a mixture of the two, about one in five thousand. The smallest dose of chloroform reported as causing death was from fifteen to twenty drops by inhalation; one drachm taken into the stomach; one drachm of a mixture containing one part of chloroform to four of ether, by bulk. It has sometimes, but rarely, been possible to detect chloroform in the blood.

Dr. Henry J. Bigelow testified that, having heard the testimony, he believed there was no question but that the deceased had died of the inhalation of chloroform. The amount of ether in the mixture could not possibly cause death. He had never known of a case of death from ether properly administered. Chloroform has besides its narcotic power some very poisonous influence, which acts on the system, and in which it differs from ether.

Drs. Cabot, Clark, Gay, and Hodges testified to the same effect.

On the next evening the jury met, and presented the following verdict:

"That Mary F. Crie came to her death on Monday, the tenth day of November, 1873, between eleven A.M. and one P.M., in the office of Dr. Charles Eastham, a dentist, No. 25 Tremont Street, Boston, and that her death was caused by the inhalation of chloroform, administered in a mixture of chloroform and ether by the said Dr. Eastham. The jury uses this opportunity to caution the public against the inhalation of so dangerous an agent as chloroform for the production of insensibility to pain. In the opinion of the jury, the inhalation of sulphuric ether is safe, while the inhalation of chloroform, either alone or mixed, is always attended with danger."

It was signed,—Ezra Palmer, M.D., John A. Lamsom, M.D., George Fabyan, M.D., George Lotz, M.D., Thomas Restieux, and Thomas Dolover.

EXCISION OF THE TONGUE (*The Lancet*, November 8, 1873).—In a case of cancerous ulcer of the tongue, Mr. Gant removed the organ in the following manner, leaving the floor of the mouth entire. An incision was made through the cheek on the left side, from the angle of the mouth to the junction of the ramus and the body of the bone; the tongue was seized with a forked vulsellum and drawn forwards and upwards; two curved aneurism-needles were passed through the base of the organ from before backwards, and a strong écraseur was then looped around the base, below the needles, which thus kept the loop well down around the whole tongue. It was worked slowly, and the tongue thus completely removed in thirty-eight minutes.

FATAL CASE OF DYSPHAGIA (*The Lancet*, November 1, 1873).—Mr. E. F. Fussell reports a case of difficult deglutition occurring in a man 47 years of age, of temperate habits, and having never had syphilis or any serious illness. There was no stammering, but some thickness of speech, so that he was unable to make himself thoroughly understood, partly from the excessive flow of saliva, which was continually running from his mouth, and partly perhaps from a paralysis of the muscles co-ordinating the power of speech. For some time he had been unable to swallow solids or even semi-fluid substances: He had had no hæmatemesis or bloody stools, no albuminous urine, and no mental symptoms whatever. On trying to swallow food it returned almost immediately. He refused to have an instrument passed, and soon died of inanition. At the post-mortem examination no disease was discovered in the mouth, tongue, larynx, pharynx, upper cervical vertebræ, pneumogastric nerves, œsophagus, or stomach. The other organs could not be examined.

ACTION OF THE CINCHONA ALKALOIDS ON BACTERIA (*The Practitioner*, November, 1873).—Dr. E. Buchanan Baxter arrives at the following conclusions as the results of a large number of experiments upon the influence of the four chief alkaloids of cinchona bark over bacteroid organisms:

1. Quinia is doubtless excelled by other antiseptics, but there is no substance equal to it in antiseptic power which can be introduced into the blood in the same proportions without risk of fatal effects, if we except the other cinchona alkaloids, and the sulphate of bebeeria.

2. Quinia in such fractional doses as are capable of being introduced into the circulation exerts an inhibitory, not a toxic, action upon microzymes. It may check septic changes, it cannot destroy the organisms to which such changes are due.

3. The four cinchona alkaloids are very nearly equal in antiseptic power. Arranged in the strict order of their efficacy, they stand thus:—quinia=quinidine; next comes cinchonidine; last, though at no great distance, cinchonina. This order corresponds to that in which they have been arranged with reference to their antiperiodic power.

4. Among reputed antiperiodics, the sulphate of bebeeria seems to equal quinia in antiseptic power.

5. Among reputed antiseptics, sodic sulpho-carbolate and strychnia have a decided value, though they stand some way below quinia; sodic sulphite has a feeble though decided antiseptic value; sodic hypo-sulphite, little or none; berberin and æsculin are hardly, if at all, antiseptic; potassic picrate is almost equal to quinia, but it is doubtful whether it can be given in sufficient doses without danger to life.

MUSCULAR PARALYSIS FROM MERCURIAL ABSORPTION (*Dublin Journal of Medical Science*, September, 1873).

—Dr. A. W. Foot reports the case of a man, æt. 23, who, while rubbing red mercurial ointment into cattle affected with pleuro-pneumonia, neglected to cover his hand, and afterwards only rinsed it in cold water. The next morning the hand and arm were numb and powerless; he could not flex, extend, or abduct the hand, and had a stinging sensation in the fingers. Three weeks later the condition persisted, though it was one of great weakness rather than complete paralysis; the deltoid was not affected, nor the muscles of the upper arm; there was no atrophy. He was ordered five grains of iodide of potassium twice a day, and subcutaneous injections in the affected forearm, at first of $\frac{1}{8}$ of a grain of strychnia every second day, and subsequently of $\frac{1}{2}$ of a grain. When he began to feel pain along the course of the median nerve, the injections were discontinued, and the primary induction current of Stöhrer's battery was employed daily. He

quickly improved, and soon recovered the full power and use of his hand and forearm.

ANOREXIA HYSTERICA (*British Medical Journal*, November 1, 1873).—At a recent meeting of the Clinical Society of London, Sir Wm. Gull called attention to a form of disease occurring in young women between the ages of fifteen and twenty-three, and characterized by extreme emaciation, which was often supposed to be due to latent tubercle, mesenteric disease, or so-called atrophy. He believed the cause of the affection to be central, not peripheral, and in using the word hysterical did not wish to be committed to its strict etymological value. The clinical characteristics of this disease are those of starvation only, and the diagnosis is to be made from the slowness of the pulse and breathing, the slightly depressed temperature, and the absence of any sign of visceral disease in the chest and abdomen. In the treatment, if possible, a change in the domestic relations should be made, food should be given at short intervals, and the patients should not be left to their own inclinations in the matter. If the exhaustion reached an extreme point, external heat might be required; but the principal dependence should be placed upon controlling moral influences, and upon feeding.

MISCELLANY.

ACCORDING to the official estimates for 1873, we have the following: *Department of Charities and Corrections*: Out-Door Poor Department, \$128,066; Bureau of Out-Door Sick Poor, \$5300; Bellevue Hospital, estimated number of patients 700, \$103,370, or \$147.67 each patient; Charity Hospital, estimated number of patients 950, \$133,302, or \$140.31 each patient; Hospital for Contagious Diseases, 180 patients, \$20,667; Fever Hospital, 60 patients, \$6179; Smallpox Hospital, 175 estimated inmates, \$24,950; Hospital for Incurables, \$13,393; Asylum for the Blind, 150 inmates, \$8055; Convalescent Hospital, 250 inmates, \$22,041; Lunatic Asylum, 1300 patients, \$119,919, or \$92.25 per patient; New York City Asylum for Insane, 650 patients, \$83,026, or \$127.72 per patient; Hospital for Epileptic and Paralytic Patients, 120 patients, \$13,172; Hospital for Infants, 450 children, \$51,780, or \$115.06 per child; Randall's Island Nurseries, 650 inmates, \$61,282, or \$93.58 per inmate; Nursery Hospital and Idiot House, Randall's Island, 450 inmates, \$47,887; Inebriate Asylum, \$23,611; Reception Hospital, Centre Street, \$10,180; Reception Hospital, 115th Street, \$5920; Ambulance Establishment, \$3995; General Drug Department, salaries, \$2500. Total, \$888,595, as the estimate for the above hospitals, etc., Department of Charities and Corrections.—*New York Medical Record*.

THE AGE OF EGGS.—*The Lancet* quotes the following from a French authority as a mode of ascertaining the age and consequent freshness of an egg: Dissolve one hundred and twenty grammes of common salt in a litre of water. If the egg is one day old, it will sink to the bottom; if it was laid the day before, it will not reach the bottom; if three days old, it floats; and if more than five, it comes to the surface, and the shell projects more and more according to staleness.—*New York Medical Record*.

CAUSTICS VERSUS WEEDS.—A recent writer of a chemical turn of mind says, "Two years ago I took a large house and grounds which had been uninhabited and utterly neglected for three years. The lawn is nearly an acre in extent. Dandelions, buttercups, plantains, docks, etc., were in the ascendant. After many attempts to eradicate them, I found at last that one drop of the common strong sulphuric acid dropped upon the crown of each weed entirely destroyed it, and it will never grow again. I used one of the ribbed bottles employed by chemists and photographers for dropping poisons, and found it to answer perfectly, and it enables one to apply the acid with great rapidity. Large docks, which have hitherto never been destroyed except by digging up, are effectually destroyed by the acid."

EARLY CLINICS.—That bedside teaching was pursued eighteen centuries ago, although in no very pleasant way for patients, appears from the following lines translated from Martial:

"I'm out of sorts, but Symmachus is here,
His hundred pupils following in the rear;
All feel my pulse with hands as cold as snow,
I had not fever then—I have it now."

—*Mapother's Address, Med. Press and Circular.*

As an example of the "multum in parvo" style, we extract the following from an article in a recent eclectic journal:

"Diagnosis—'jiggers.' Prescription—sulphite of soda. Result—fixed them the first day."

CHOLERA dejections and vomit in the Dresden Hospital are received in a mixture of sawdust and charcoal, on which petroleum is then poured and the mass burned.—*Northwestern Medical and Surgical Journal.*

SPIRITUALISM is a comet with a small body of natural fact and an enormous tail of guessing, of sensation, of superstitious and ignorant fear, and of conscious and interested imposture.—*John Hall, D.D.*

COSTE, the celebrated naturalist, was almost sightless at the time of his death, having destroyed his vision with the microscope. At the time of his decease he was sixty-six years of age.

It is proposed in Italy to erect a monument to Eustachius. Few anatomists have had their trumpet so much blown.—*Boston Medical and Surgical Journal.*

DR. F. CRACE-CALVERT, F.R.S., famous for his researches upon disinfectants, died in Dublin, October 24, aged fifty-three years.

NOTES AND QUERIES.

BUCKS COUNTY, PENNA., November 28, 1873.

DR. GROSS:

DEAR SIR,—I have a great desire to study medicine, but have what seems to me a great obstacle to overcome. It is a certain sympathy with the patient, in which I am affected as much by the operation as the patient himself, producing in me a sickness over which I have no control.

I have never seen but one operation performed in your college, and that had the above effect on me. Now, will you write and tell me if this feeling can be overcome? for by so doing you will oblige me greatly.

Respectfully,
J. B. C.

Answer.

PHILADELPHIA, November 29, 1873.

DEAR SIR,—The difficulty to which you refer is more imaginary than real, and can, with a little practice, be readily surmounted. The sight of a severe surgical operation is to many persons exceedingly disagreeable, and at first sometimes even sickening. I have seen as many as three, four, and even five young men faint around me at the first few clinics at our college at the opening of almost every session since I came into the school. But in the course of a week or two nothing of this kind is witnessed, and the most delicate student is able to look with perfect unconcern at the most bloody operation.

The human mind, however sympathetic, has a wonderful faculty of accommodating itself to circumstances. When I was a student in the office of the late Dr. George McClellan, it devolved upon me to hold the basin while an older pupil bled a patient, and the result was that I became so sick that I was compelled to step out into the yard to avoid fainting. I soon got over this feeling, and I presume there are few men who have performed more severe or bloody operations than I have, or who are more self-possessed in cases of emergency. Your own case, then, you perceive, is not a hopeless one. A little determination will enable you to overcome this feeling, and it is only necessary for you to persevere in your laudable effort to study medicine, to become a great surgeon. A tender heart, so far from being an objection, is one of God's greatest gifts in a practitioner of the healing art.

When you visit the city, it will afford me pleasure to see you, and to offer you in person a word of sympathy and encouragement.

Very truly yours,

S. D. G.

Mr. C.

CHESTER COUNTY MEDICAL SOCIETY.

At the stated meeting of the Chester County Medical Society held in West Chester on Tuesday, October 28, 1873, the following preamble and resolutions, offered by Dr. Jacob Price, were unanimously adopted:

"Whereas, Since our last meeting it has pleased God to remove from a life of usefulness and honor our esteemed colleague Dr. Wilmer Worthington, and whilst we bow in all humility to the dispensation, we cannot avoid, upon this occasion, giving expression to the sorrow his death has caused in the heart of every member: therefore,—

"Resolved, That this Society has heard with deep regret of the death of Dr. Wilmer Worthington, one of its founders, and through his long life one of its most faithful and useful members.

"Resolved, That in this event our Society has sustained a loss that cannot easily be replaced; and that the remembrance of his earnest and self-sacrificing devotion to the interests of science, of the medical profession, and of humanity, should stimulate us to increased energy in the discharge of the duties that rest upon us as physicians and citizens.

"Resolved, That this Society sympathize deeply with the family of the deceased in their great bereavement.

"Resolved, That a committee be appointed to prepare a biographical notice of the deceased, to be embodied in the Transactions of the Medical Society of the State of Pennsylvania.

"Resolved, That the Secretary be directed to furnish the family of Dr. Worthington with a copy of the foregoing resolutions, and also copies to each of the county papers, and the medical journals published in Philadelphia, for publication.

"EPHRAIM HOPKINS,

"Recording Secretary."

OFFICIAL LIST

OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U.S. ARMY, FROM DECEMBER 2, 1873, TO DECEMBER 8, 1873, INCLUSIVE.

VICKERY, R. S., ASSISTANT-SURGEON.—Assigned to duty at Jackson Barracks, New Orleans, Louisiana. S. O. 188, Department of the Gulf, November 28, 1873.

DE WITT, C., ASSISTANT-SURGEON.—Granted leave of absence for six months. S. O. 241, A. G. O., December 14, 1873.

KIMBALL, J. P., ASSISTANT-SURGEON.—Assigned to duty at Fort Randall, Dakota Territory. S. O. 266, Department of Dakota, November 28, 1873.

SATURDAY, DECEMBER 20, 1873.

ORIGINAL LECTURES.

CLINICAL LECTURE

ON A PAPULO-SQUAMOUS SYPHILO- DERM.

Delivered in the University of Pennsylvania,

BY LOUIS A. DUHRING, M.D.,

Clinical Lecturer upon Diseases of the Skin.

THE patient whose disease we propose to consider is a well-built, strong-looking man, 36 years of age. Fourteen years ago, he says, he had a venereal sore upon the penis. This healed in a few weeks, and two months later an eruption of reddish spots and blotches appeared over his body, followed by sore throat and by pains of a darting nature in his limbs. The eruption soon subsided, but he has had relapses of a similar eruption on several occasions since. He remarks that he has been treated for syphilis at various times by several physicians. The present disease which we see scattered over his body is of four years' duration, never having left him entirely within this period. Such is a brief history of his trouble. We would describe him as having an extensive cutaneous disease, extending over the scalp and forehead, especially just below the line of the hair, about the ears, somewhat upon the back, abundantly over the chest, and lightly over the arms, thighs, and legs. It is most pronounced upon the chest and upon the scalp. Upon the chest the eruption consists of a large, irregular-shaped patch, made up of papules and tubercles closely studded together, forming here and there solid masses of disease. In places the papules and tubercles are separate, discrete, with sound skin between them. They vary in size from a large pin-head to a small pea, are markedly elevated, are not, however, acuminate or pointed, but flattened, and covered with scanty, adherent, yellowish-white scales; others are entirely free of scales, and possess a smooth, reddish surface. The color of the eruption is a livid red, especially brilliant upon the parts free of scales. Now, the disease upon the scalp we observe to be different in some of its characters. Instead of the papules and tubercles which we see upon the chest and other parts of the body, we have only a slightly-elevated, very imperfectly-defined, reddish infiltration or deposit in the skin, covered extensively with scales and sebaceous matter, running over the scalp in a serpentine course. If you attempt to follow the track of the eruption, its irregular, winding, broken trail is difficult to trace. It possesses a linear form and a serpentine, twisted course. Eruptions in the scalp having this aspect must always be regarded as very suspicious of syphilis, for this is the favorite outline in which syphilis of the scalp tends to manifest itself. The scales are very thin, and at the same time very adherent, and are detached with difficulty; they cannot be shaken off loosely, as in psoriasis or sebor-

rhoea. There is no moisture or ulceration whatever about the scalp, or indeed anywhere upon the skin. Our patient is a carpenter, and sweats freely when working, at which time, he tells us, the eruption itches and annoys him. It is a very commonly received idea that syphilitic eruptions do not cause itching; that these diseases of the skin are always free from this annoyance. Now, this idea is true to a certain extent, but it must not be accepted without reservation, for the degree of itching in any case of cutaneous disease will depend materially upon existing circumstances. Thus, when estimating the amount of itching present, allowance must be made for temperament,—whether the individual possess an irritable, quick, nervous habit, or whether he be indifferent and stolid. A nervous, excitable patient will incline to rub, scratch, and irritate the disease, whatever it may be, and so induce additional, artificial, nerve-irritation.

The seat of the eruption likewise influences the amount of itching. The occupation and the general habits of the patient also often afford a clue to this symptom. If you desire to know exactly what degree of itching a certain manifestation upon the skin causes upon an individual, it will be necessary to inquire minutely and with questioning into all manner of detail: whether the symptom is constant, periodic, or irregular in its course; whether the occupation, or exposure to cold or heat, sweating, and other conditions, influence it in one way or another. Copious sweating, the excretion coming in contact with diseased and abraded skin, is generally the source of some itching and burning in certain diseases, particularly in some syphilitic eruptions; and the annoyance in the case before us may be explained in this way. I must not be understood as saying that syphilitic eruptions always cause itching, for the rule is that they do not give rise to this symptom. I do desire, however, to call attention to the fact that itching may be present with some syphilitic eruptions, and that syphilis must not be excluded because a disease of the skin itches. But to return to our case. If we examine closely and endeavor to study the arrangement of the eruption upon the body, we shall see that the larger patches are made up of numerous smaller ones, which have coalesced and encroached upon each other. There exists also a tendency to a uniform arrangement of the individual papules: they are placed together in a crescentic or semicircular form. This grouping which the papules are wont to assume must not be lost sight of, for it is of diagnostic value. Experience teaches us that the papules and tubercles of syphilis are prone to take on this arrangement, so that when we see it in diseases like the present we are at once suspicious of syphilis. It is readily recognizable in most cases, though not always so well marked.

The history in our case happens to be a clear one, from the chancre, through the various symptoms, to the eruption before us; but even had we no history of the initial lesion, or indeed of any venereal trouble, as is so often the case, we should

be fully justified in making the same diagnosis with quite as much assurance, for the skin manifestation alone is sufficient for our purpose. Such an eruption is always syphilis and can be nothing else. It is due to one cause, and only one, the inoculation of the virus syphilis in one way or another. How the inoculation has taken place, whether through coition or other ways, it matters not, so far as our diagnosis is concerned. Syphilis is a most subtle poison, nor are the various avenues and ways of contagion in many cases which come under our notice by any means clear. But, having certain manifestations upon the skin, we are always warranted in saying that the disease is positively due to syphilis and to no other cause, permitting the history to go for naught. For, gentlemen, the lesions of the skin due to syphilis are no longer involved in obscurity; they are known, are accurately described, and readily discerned when they show themselves. Our knowledge of the various forms of disease which the integument of the body assumes is becoming more definite year by year, and dermatology and syphilology have each been elevated by the hard labors of those who have given themselves to this task.

In making the diagnosis of our case, the fact must not be forgotten that there are diseases with which it may readily be confounded, if care and attention be not exercised. But there is one non-syphilitic affection in particular which frequently resembles papulo-squamous syphiloderms, and to which I desire to call your notice. I refer to psoriasis, or psoriasis vulgaris as it is also called, a disease in no way connected with syphilis, which, however, in some of its forms and stages looks at a glance not unlike it. On the other hand, certain of the squamous syphiloderms sometimes resemble psoriasis so much as often to be the cause of error in diagnosis.* These two distinct cutaneous manifestations, though at times so alike in appearance, let me here state, are absolutely never in any way connected with each other. They are widely separate processes. They are different pathological changes, and hence can bear no relation to each other. Yet they are not infrequently confounded, and it behooves us to study them accurately. A disease of the skin, gentlemen, is either the direct, immediate, positive result of the inoculation of syphilis, or, on the other hand, it is positively in no way connected with syphilis. There is no mysterious obscure course about the eruptions of syphilis: when they appear they are to be recognized as syphilis, just as a chancre is recognized as syphilis, and they constitute a definite group of symptoms. The various signs which the virus syphilis is capable of producing upon the skin are well-known and usually familiar forms, and they are to be regarded as the immediate result of the poison.

A word only concerning the treatment of our patient, which, with our views settled as to the diagnosis, is sufficiently simple and plain. Iodide of potassium in appropriate quantity is without question the remedy demanded. The patient will be

ordered ten grains, dissolved in a drachm of wine of iron, to be taken three times a day, about an hour after eating, and well diluted with water. If this quantity be not contra-indicated by any idiosyncrasy of the patient, as for instance by ptialism or coryza, it will be proper to allow him to continue this treatment for at least two or three months. But the length of time which a patient may take such a remedy will depend upon circumstances which may arise from time to time, and therefore no definite rule can be given. He should, however, take the medicine for several weeks, or longer, after all symptoms of disease have disappeared. The improvement in this case will probably not be rapid, owing to the extensive infiltration into the skin, and the squamous form which the disease has assumed, and which is always slow to disappear. With the exception of simple warm baths, which will be ordered, together with attention to cleanliness, the case does not require local treatment. We shall depend entirely upon our internal remedies.

[November 1, six weeks after date of lecture. The patient very greatly improved. The eruption has almost, if not entirely, disappeared from the scalp, and the patches upon the chest and abdomen are paler in color, and the induration very much less. He has been taking steadily the prescription ordered.—L. A. D.]

ORIGINAL COMMUNICATIONS.

THE CAUSES OF THE EXTENSION OF TYPHOID FEVER.

A Paper read before the Philadelphia County Medical Society, November 12, 1873.

BY DR. GEORGE HAMILTON.

MR. PRESIDENT, AND GENTLEMEN OF THE SOCIETY,—In compliance with the duty imposed upon me at the meeting held October 8, I offer as introductory to the discussion appointed for this evening a few remarks in relation to typhoid fever, having reference more especially to its causation and extension.

Most of those present have probably noticed in recent numbers of the medical journals reports of outbreaks of typhoid fever in various parts of Great Britain: of these, the one occurring in a certain district of London has most interested and occupied the attention of the medical profession, as its exciting cause seemed to have been clearly traced to the use of water or milk contaminated by the fecal discharges of patients affected with the disease. Cesspools, or drains connecting with them, are referred to as the chief sources of the vitiation of the water used. Uncovered vessels containing the milk alluded to had been kept (it is not stated how long) in the chamber of a man sick with typhoid fever, and this milk is believed to have been infected through absorption of the effluvia issuing from the skin, the lungs, or from the fecal dejections of the patient, as nearly all the persons to whom the milk had been sold were attacked by the fever.

* We shall have the pleasure shortly of laying before our readers a paper by Dr. Duhring giving the differential diagnosis between squamous syphiloderms and psoriasis.—*Ed. P. M. T.*

In the *Medical Times* of this city for September 27 will be found a statement from Dr. Murchison in regard to this matter, in which, as it appears, several members of his own family were, after using this milk, prostrated with fever. This account, and several others of nearly similar import, are doubtless candidly and fairly drawn out, and seem, at least, to rest upon a close observation of facts. In a paragraph of the *Times*, directly following the history of this outbreak of fever, the editor proposes, as worthy of discussion, this pertinent question: "Why, with our almost universal private cesspools, are we so exempt from epidemics of typhoid fever in Philadelphia? The disease is always with us, but anything like a spreading epidemic is a thing unheard of, at least in our experience."

Every intelligent, well-directed effort to determine the true source and mode of extension of this disease is worthy of commendation; and though such attempt, owing to the inherent difficulty of the subject, may be only partially successful, it nevertheless deserves the support of every one duly interested in the welfare of the community. That this matter needs, as the editor of the *Times* declares, investigation, is manifested in the diversity, and at times contrariety, of opinions still advanced in regard to the sources and modes of propagation of typhoid fever. Of those who have written upon the subject, a majority, probably, have had for their field of practice large cities and hospitals; and common observation has shown how difficult it is, in such positions, to arrive at a satisfactory solution of the question proposed. If the opportunities afforded in country and village practice were taken advantage of by the intelligent and observant practitioner in such favorable positions for observation, some definite conclusion might possibly be arrived at; for, as a rule, he is in such a relationship with nearly the entire population within the circle of his practice, as enables him to discover the situation and surroundings of the family in which the disease first appears. If the complaint spreads, as it sometimes does, to an extent and with a virulence and fatality hitherto unknown in this and many other cities, he may trace, as it were, from house to house, the direction the disease has taken, and the regular or interrupted movement that has marked its progress.

In consequence of the limited population and the isolation of the families, it is comparatively easy to ascertain if any opportunity for a contact of suspicious character may have occurred, the time, and the attending circumstances; whilst in vast and crowded populations continually in movement and nearly in contact, these points can seldom be satisfactorily established.

In regard to the origin of typhoid fever in the particular district in which the residence of Dr. Murchison is located, and from which his own family suffered, we may draw at least one practical lesson,—viz., if milk exposed—probably for no great length of time—to the atmosphere of a chamber in which a man affected with typhoid fever lies is susceptible of such alteration as to render it capable of engendering this disease, we may thence learn the necessity of guarding against risk of this

kind by enjoining upon those who may be in attendance as nurses to forbid children or others, who may gain access or be admitted to such room, to partake of milk so exposed, as is doubtless sometimes done even by adults, having no squeamishness and perhaps apprehending no danger from this source. A similar admonition is, perhaps, advisable in reference to all drinks and food, as some of these may be equally possessed of liability to vitiation from similar exposure.

The history of this outbreak of typhoid fever, in connection with that of some others occurring in various parts of England and Scotland, attributed in a number of cases to the use of water or milk poisoned through the medium of cesspools or sewers, will perhaps do much to strengthen the views of those who believe these to be the chief if not exclusive sources of typhoid fever, and efficient agents in its dissemination. Dr. Budd commits himself definitely to this view of the subject, and has, without doubt, many supporters; whilst a larger number, though conceding at times the influence of other agents, evidently regard the latter as of minor importance. A still greater proportion of writers and practitioners, especially those who have witnessed the violent epidemics that from time to time ravage the country, do not fully accept these restricted agencies as the dominant ones in their production, but are disposed to attribute them to some more general, more diffused influence, spontaneous in its origin, whose baleful effects they are acquainted with, but of whose nature and mode of action they are profoundly ignorant. Bretonneau has long since declared his belief in the contagious character of typhoid fever, an opinion in which probably only a small number of physicians coincided. Gendron, influenced, apparently, by what he had witnessed in regard to its development in the country, adopted the same view as Bretonneau, alleging as the cause of its greater and more rapid extension in rural districts the comparative small size of the chambers of the sick, and the more constant presence of the attendants in the room of the patient. He remarks that the sources of the first cases are frequently beyond our knowledge, even in isolated populations, and expresses the opinion that the disease is susceptible of transmission from fomites as well as by contact. Dr. Nathan Smith, one of the early most noted and experienced of American practitioners, declared himself in terms essentially similar. The vast majority of authors regard putrescent animal matter as the more usual source of typhoid fever, and some speak of it as being infectious and likewise contagious,—affecting the rich and the poor indiscriminately. Niemeyer expresses the opinion that spontaneous development of germs is an agency in the production of the disease, as well as that arising from cesspool contamination; also, that it may be of miasmatic or contagious origin; but that great difficulty exists in determining which of the two is the agent in crowded cities, where, owing to the great abundance of decomposing and putrescent animal substance, an unusual liability to the disease from either cause must be admitted. He alludes, in common with many other writers, to

the disposition to typhoid fever of persons recently arrived or having lived but a moderate length of time in places where the disease prevails. Physicians and nurses waiting upon those affected with the disease, he thinks, are seldom attacked. Flint admits the contagiousness of typhoid fever under certain circumstances. Spontaneous generation, however, probably evolved from putrescent animal and vegetable substances, he regards as the more general cause of the disease, but whether by the production of a specific poison, or as an auxiliary, is not satisfactorily determined.

A marked feature in the history of typhoid fever, noticed particularly by Drs. Nathan Smith and others, and that has given rise to much comment, is the erratic course it sometimes pursues, either in cities, or in the country, where it is more frequently noticed. In some seasons it will diffuse itself rather uniformly over a greater or smaller district, and, sooner or later disappearing from this, will reappear and diffuse itself over another tract near to the former, or at the distance of many miles, and at length revisit the place of its first appearance. Occasionally the disease is restricted to very narrow limits, and will, without diffusing itself, retire from this locality, to reappear, perhaps, at the distance of several miles, the intervening space escaping altogether. Dr. James Jackson speaks of the disease as sometimes appearing in a village or a single family, without leaving the precincts of either, when upon examination no appreciable cause for the attack could be discovered. In these instances he supposes its source to be some peculiar local condition of the soil, unconnected with filth or putrescence. This opinion, distinguished as the source whence it emanates is, will probably find little favor at present, when so many causes of a more definite and tangible character are adduced as the efficient agents in the production of typhoid fever.

My own experience and observation in the disease have been acquired in both country and city practice; and, whilst it may be said that the city is never entirely free from the malady, the same cannot be asserted in relation to the country. The complaint, however, once appearing in a rural section, is greatly disposed to spread and assume more or less an epidemic character; so that the number of persons attacked in proportion to population is correspondingly large. If typhoid fever, in my experience, once gained admission to the house of a farmer or his tenant, and the family were of the average number, as a rule it would not disappear from the premises until several persons had suffered an attack; whilst, on the contrary, my practice in this city, excluding one family where four persons were attacked, and two or three others in which two persons were affected with the disease, has given but a single case to each house. In the family of a wealthy farmer, consisting of eight individuals, all, except one, were affected,—six of them dangerously. The history of the disease as regards this family may, to those whose practice has been confined to the city, appear somewhat striking; yet it is nothing more than had from time to time been noticed by the country practitioner of that period, and doubt-

less since, where the complaint may have prevailed as an epidemic. A son of the farmer alluded to was the first to sicken, but not upon the premises. He had been absent from home for a number of weeks, at the distance of thirty-five or forty miles, and from thence he was removed, after the attack, to his father's residence. There was nothing in the location or the surroundings to account for the extension of the complaint to the remaining six members of the household,—the drainage from any suspicious matters being in an opposite direction to the supply of water for the family. In another farmer's family, of eight or nine persons, five were prostrated with typhoid fever. The mother was the first attacked; and she had been in almost constant attendance, by day and by night, at the bedside of a near relative suffering from the disease and living at the distance of several miles from the home of this mother.

It should perhaps be stated here that more than ten years elapsed from the time of my going to the country until my return to the city, and that during the first five or six years no cases of general fever were observed, other than those called bilious remittent. Yet for a season or two preceding the outbreak of typhoid fever some modification of the remittent form would arrest the attention of physicians. The first case of decided typhoid character occurred in the practice of a brother practitioner residing in my immediate vicinity. The house in which it appeared was situated near the Brandywine, about three miles below Chadd's Ford. As there had been no opportunity for contact of a suspicious character, and the local conditions were materially the same as they had been for an indefinite time, it was difficult to account for the peculiarities of this case, and it was therefore regarded as developed spontaneously through the agency of some general but indefinable influence. The disease gradually extended itself, though somewhat irregularly, during that season, and at the same time a more decided modification was noticed in the character of remittent fever, until at length its peculiar features were lost, or, as it were, supplanted by those of the typhoid form. The history of this first case, to whatever source it may have owed its existence, may be regarded as the prototype of other first cases, springing up in various sections of the country. In view of the fact that the condition of the farm-houses in general, and their respective local peculiarities, differed in no perceptible degree from those which had long characterized them, and in the absence of any known opportunity for contagious influence, the conclusion of the great body of country physicians of intelligence and observation was coincident,—that the outbreak was not referable to a perceptible specific cause, but was probably dependent upon atmospheric or telluric influences of exceptional character. For in this connection it must be remembered that the disease will sometimes, after having spread through a district for a season, again, in a year or two, reappear, and be nearly or quite as prevalent and virulent as before, the local conditions in the mean time remaining, so far as discernible, essentially the same.

It is, therefore, not surprising that Dr. James Jackson should have expressed the opinion that the disease might, under some circumstances, be indebted for its cause to a special local condition of the soil. The mutual actions and reactions of atmospheric and telluric elements, influenced as they doubtless are by changes in barometric, electric, thermometric, and hygrometric states, are absolutely unknown. To be able to assign to the operation of a palpable agent the origin of that class of diseases to which that under consideration belongs, is, indeed, a desideratum, for in this event we should perhaps have at command the means of cure, or, better still, of prevention. The attempt, however, of later years to attribute special poisons, received from without, as the causes of many diseases has, to a considerable degree, failed, partly for want of a sufficient number of pertinent and well-ascertained facts, and partly from attaching too little importance to the power of the organism itself to originate under certain circumstances elements of a deleterious nature, the product, generally, of abnormal physiology, in other cases the result, apparently, of physical or chemical action.

The views thus summarily expressed in reference to the origin and spread of typhoid fever are, as we think, nearly identical with those held by the majority of practitioners, and differ but little, if at all, from what is found in the writings of Drs. N. Smith, Bretonneau, Gendron, James Jackson, Flint, Bartlett, Niemeyer, and of many others of similar observation and experience.

Typhoid fever, as most of those present well know, has, for many years past, undergone an extraordinary modification. The allusion is to the comparatively small number of cases seen in the city, or in the older, more thickly-settled portions of the country, and to the greatly diminished mortality. The late Dr. W. W. Gerhard many years ago said to the writer that he no longer regarded typhoid fever as very dangerous, the change for the better in this city resembling what had long since been observed in Paris, where the mortality had, through a series of years, fallen from thirty-three to only five per centum, and this, too, without appreciable cause. The disease appears to be most prevalent and fatal for some years past in the smaller towns and villages situated in distant parts of the country, or in the less thickly-populated portions of the older States. The late Prof. J. K. Mitchell once informed me that nearly all the cases he saw were in the suburbs rather than in the central parts of the city, and this, we have reason to think, has been the experience of many other physicians.

The question, then, naturally arises, why typhoid fever should diffuse itself so much more extensively, rapidly, and fatally in the country than in this and many other cities. The opinion of Gendron, that in the country the more rapid extension of the disease through the family, and even beyond, might be attributed to the smaller size of the chambers and to the more constant attendance of the members of the family at the bedside of the patient, has, perhaps, some foundation, whilst it must be admitted that the malady is as frequently found in

the mansion of the farmer as in the cottage of the laborer. A widely-diffused, a sort of epidemic influence and contagion are evidently at work, just as we observe in several other acute affections in country neighborhoods, and to these chiefly are to be ascribed the frequency of attacks and their fatality.

The late Dr. Joseph Parrish used to remark in his summer course of lectures that in the consultations to which he had been called within a radius of eight or ten miles he had noticed that attacks of dysentery and remittent fever were beyond all comparison more numerous and fatal than he had ever witnessed in the families under his immediate care; and this is strictly in accordance with our own experience. The same observation holds good in relation to several other maladies, notably so in the instances of diphtheria and cerebro-spinal meningitis. Most of those whom I address can, doubtless, call to mind reports from various sections of Pennsylvania and New Jersey where in a single family four or five deaths had sometimes occurred from one or the other of these diseases; whilst this city, with its crowded population, passed through one or two epidemics of this kind with but a moderate number of deaths.

In view of these facts, with no appreciable local conditions to explain them, the inference seems inevitable that the greater proportionate number of cases and fatality of typhoid fever in rural districts are referable to a general dominant influence, unknown as to its nature or mode of operation, but perceptible enough in its effects. Whilst Dr. Budd and those who adopt his views are of opinion that the actual entrance into the stomach of water or other substances infected more or less indirectly by the fecal dejections of those suffering from typhoid fever is the general, if not exclusive, source of the disease, medical authorities commonly entertain the sentiment, as before stated, that to the decomposition and putrescence of animal and vegetable matter in general are we to attribute the origin of the malady. Whether the effluvia arising from putrescent substances become a cause of typhoid fever by being received into the stomach, through direct or indirect means, as some suppose, or from absorption by the mucous membrane of the lungs, as others believe, and whether the person suffering from the malady becomes himself a source of the disease to others exposed to inhaling the effluvia emanating from the surface of his body or lungs, or from his fecal discharges, are points more or less connected with the proposition for examination. The real purport of the question was to invite discussion regarding the singular fact that the city, honeycombed by cesspools (as the editor of the *Medical Times* rather facetiously says), is so generally exempt from any violent outbreak of typhoid fever. From what has been said, it is clear the question need not be restricted to such narrow limits; for, independently of cesspool vitiation, there are in the city innumerable sources of putrescence that either exist not at all or to a very slight extent in the country. The bone-boiling and fat-melting establishments, the soap- and glue-factories, the places for the reception and utili-

zation of dead horses, cows, and other domestic animals, the sites for the deposit of night-soil, ill-conditioned slaughter-houses, with their appendages in the shape of wells, pits, sinks, and connecting drains, the close, dark, confined cellars serving as adjuncts to inferior provision-stores, sometimes reeking with the exhalations of putrescent animal and vegetable matter, and, in addition, the numerous cellars and back yards of the poor, improvident, and degraded, where the eye and the sense of smell are alike offended and disgusted.

It is, then, not surprising that Niemeyer and many other writers have declared that the elements of typhoid fever abound to an extraordinary extent in large and crowded cities.

The question proposed is thus rendered more pertinent, and apparently more embarrassing and difficult of solution; yet a single fact, before alluded to, that strangers entering into or persons having lived but a moderate length of time in cities or towns where the disease exists are especially disposed to be attacked, may perhaps justify the supposition that the germs of the malady are, to the permanent population, rendered nearly innocuous, from a sort of power of accommodation or resistance, on the part of the economy, to a nearly always present noxious agent, of variable yet for the most part not great intensity. But a truce to theory.

In the recent International Medical Congress held at Vienna, an interesting report of which is to be found in late numbers of the *Medical Times* of this city, Prof. Hebra, one of the Vice-Presidents, said, in relation to the duties of delegates to that body, that "learned discussion of theoretical points was not wanted, but rather the promulgation of the results of observation made from the proper objective point of view." Impressed with the justness and value of this remark, and conscious that the question before you for examination this evening can alone be solved, or in some degree advanced, by pursuing the path just indicated, I refrain from further trespass upon your time, well convinced that verbal discussion, affording as it does to each member opportunity to relate that which he has had under actual observation, must result in eliciting a greater number of important facts and pertinent observations in regard to the subject in hand than could be expected in a short paper relating briefly the experience of an individual, or giving expression to such facts and observations as casually occur or might be cited from a cursory and an imperfect examination of authorities.

NOTES OF HOSPITAL PRACTICE.

PENNSYLVANIA HOSPITAL.

SERVICE OF DR. T. G. MORTON, NOVEMBER, 1873.

Reported by Dr. D. DAVIDSON.

CASE I.—POPLITEAL ANEURISM—CURED BY FLEXION.

W. H., a miner, aged 26, was admitted October 23. Five weeks ago this patient had his left leg caught in the wheels of a truck which he was pulling,

and a severe twist of the knee was the result. He was able to continue at work for a day or so afterwards, but great swelling, pain, and stiffness of the knee and limb soon followed. On examination we find a painful, rather dense, pulsating, and movable tumor, about as large as a chicken's egg, in the popliteal region. Pressure on the femoral artery controls the pulsation, and decided pressure on the tumor produces the same result. There is no pulsation in the anterior or posterior tibial arteries, and the temperature of the limb is four degrees lower than that of the other side. The diagnosis of the case is, that a rupture of the artery has occurred, and has been quickly followed by the formation of a tumor, and also of a clot which has doubtless extended into the artery, obstructing the flow of blood through the limb so that circulation in the femoral exists only as far as the tumor. There has been a gradual absorption of the extravasated blood in the popliteal space, and by the collateral circulation the limb is nourished. Since pressure on the tumor entirely controls the pulsation, flexion of the limb will doubtless effect a cure. A pad of lint was applied to the aneurism, and the limb was firmly flexed upon the thigh, and retained in this position by a bandage which encircled the patient's waist.

November 8.—The apparatus was removed, and the tumor was without any pulsation, and much reduced in size.

November 26.—The patient was discharged cured.

CASE II.—SUSPECTED CALCULUS IN THE URETER—DIRECT EXAMINATION OF THE URETERS.

There has been a case in the hospital for some time past the diagnosis of which has been somewhat obscure, and which has been cleared up by a comparatively novel operation, which in doubtful cases may prove of considerable value.

This patient, a jeweller, aged 26, in the month of August last, was seized in the right iliac region with intense pain, which at first was constant, but afterwards intermittent: it was always referred to the same locality. The suffering has been at times so great that large doses of morphia hypodermically have failed to give relief, and the patient has been kept often for hours under the influence of ether. Obstinate constipation of the bowels, with pain in the iliac region, and suppression of urine, without fever or any gastric disturbance, have been the prominent symptoms. The most active purgatives and enormous enemata have failed to produce any action of the bowels, except at long intervals, and then the discharges have been very slight.

The abdomen on examination did not at any time show the least swelling or evidence of inflammation; the right iliac region was very sensitive, and deep pressure produced intense pain. An enlargement, which was apparently the seat of the trouble and was about the size of a pigeon's egg, could be felt deeply situated. A finger passed into the rectum did not reach the enlargement. Whether the mass was a calculus in the ureter, or some impaction of the bowel, or tumor pressing on the ureter, was not determined.

November 21.—The bowels were well cleaned by a large dose of oil, followed by a stimulating enema, as it was determined to explore the rectum by the introduction of the entire hand into the gut.

After complete anæsthesia, Dr. Morton gradually dilated the anus with the fingers of the right hand; the parts quickly yielded, and the hand and forearm were readily carried into the bowel. The line of the ureter and the region of the kidney were found normal; the aorta and iliac vessels were readily distinguished, and it was definitely ascertained that no calculus existed, and that the pain was either simply neuralgic, or was dependent upon a mass of hardened feces, which came

away just before the etherization. The patient had no control over the bowel for two or three days after the operation, but on the fifth day the sphincter resumed entire control over the anus. Several large stools were passed directly after the examination.

November 27.—Patient discharged quite well.

In many cases of doubtful diagnosis in abdominal tumors, aneurism, etc., this method of rectal examination might be of great value, while we have exhibited in this case the wonderful dilatability of the rectum without any ill effect upon the sphincters.

ILLUSTRATIONS OF LEPRO TUBERCULOSA OR GREEK LEPROSY.

Through the kindness of Joseph G. Rosengarten, Esq., of this city, I am enabled to show you several photographs illustrating the Greek elephantiasis,—lepra tuberculosa; a leprosy, so called, which has lately occurred at Honolulu.

Mr. Lawrence McCully, resident at Honolulu, writes, "The system of the government has been to gather all cases, known or suspected, into a temporary receiving hospital, near Honolulu, there to be examined by the surgeon in charge, and if doubtful, or if appeal to others is made, then by other surgeons of the city. The pronounced lepers are then sent off to the leper settlement on the island of Molokai (at this date one of the smallest of the Sandwich Islands, and lying south of Honolulu). The work has been finished; there are none now in the receiving hospital; and I am assured by the chief agent of the Board of Health that there are now no lepers abroad who may be brought in. We can only wish and hope that he is quite correct, and that no more will develop.

"The settlement at Molokai, in the first place, is isolated by law for the residence of the lepers.

"From the leper settlement, the following extracts from a letter of recent date received from Mr. William P. Ragsdale, at Kalawao, will be read with interest:

"I am happy to inform you that the lepers are well taken care of. The majority of the afflicted have better homes, and more and better food than they were able to get at their own homes,—wholesome food. No pains nor expense have been spared to give comfort to the poor leper. I am at present engaged in laying water-pipes from the Kalawas (not Kalawao) gulch to the leper hospital, about one and a quarter miles; will finish this job up in about one week's time. This will be a very great help to the poor lepers (who have had heretofore to carry their water on their backs, and on the backs of their animals), and assist them in keeping clean their bodies. They have got plenty of land to cultivate, if they are inclined that way: very few of them indeed have shown any desire for mahiai (cultivating). The total number of lepers at this settlement is seven hundred and ninety-seven: forty-five are school-children, three foreigners, and some five or six Chinamen. There are fifty-seven who are cared for in the hospital ward and fed by the cook; twenty-nine live in the cottages on the hospital premises. The sick in the hospital are looked after in the best manner; they have everything to eat that they may have any wish for. Mr. William Williamson is the purveyor of the hospital, and he takes very good care of the sick, as far as I have been able to see; and the cleanliness of the patients is more carefully looked after than formerly."—*Advertiser*, October, 1873.

"The writer, Ragsdale, a leper, is a half Hawaiian; the Williamson mentioned is an Englishman, with a native wife and family; is himself a leper, and all the family lepers."

The disease appears to be looked upon as *contagious* and generally incurable. Prof. George B. Wood states this: "The part most frequently affected is the

face: knotty, irregular prominences are exhibited here and there over its surface, separated often by deep furrows. The skin is much hypertrophied and rugous upon the cheeks, forehead, and chin; the lips, ears, and alæ of the nose are enormously thickened; the nostrils are distended and the brows overhanging; the eyebrows, eyelashes, and beard have fallen off, and the whole face is enlarged, uneven, oily, and of a peculiar dusky hue.

When a limb is invaded, the subcutaneous tissue often swells, the tumors are thickened and discolored, and the part affected becomes greatly deformed.

WILLS OPHTHALMIC HOSPITAL.

SERVICE OF GEORGE C. HARLAN, M.D.

Reported by W. H. WINSLOW, M.D.

ASTHENOPIA—ACCOMMODATIVE AND MUSCULAR. HYPERMETROPIA.

J. L., a healthy woman, æt. 20 years, a domestic, first noticed a weakness of vision three years since, which had continued up to the time of her application for relief. There was much intra-ocular and supra-orbital pain, accompanied by frontal headache, which latter increased in severity whenever she used her eyes in bright light. Sometimes, during paroxysms of pain, she lost her sight completely for a short period, which probably occurred from paralysis of the accommodation. At such times the eyes became injected and hot, and the tears would flow freely, covering the blurred and indistinct impressions of the printed page. After rest for several days, all these symptoms would disappear, only to be renewed by use of the organs in near vision. The patient was really very uncomfortable and much distressed for fear she would ultimately lose her sight entirely. She stated that she suffered much pelvic pain during menstruation, and occasionally had temporary loss of power in the arms, probably a form of hysterical paralysis.

The eyes and appendages proved to be perfectly healthy in appearance and action. In the right $V = \frac{20}{L}$ Snellen, and in the left $\frac{20}{XL}$, but with a $+1\frac{1}{8}$ glass it rose to $\frac{20}{XX}$ in this eye.

Ophthalmoscopic examination showed the fundi normal, but detected a very high degree of hypermetropia.

After paralysis of the accommodation by atropia, there was found a hypermetropia in the right eye of $\frac{1}{2}$, and in the left $\frac{1}{4}$. She was ordered glasses of $+1\frac{1}{8}$, which improved her vision much and entirely relieved the distressing symptoms above enumerated.

The full correction was deferred to a future time, as she had very little near work to do, and could not relax her accommodation enough to see distinctly at a distance through stronger glasses. She was also ordered the elixir of iron, quinine, and strychnia, as her general health was a little below par.

TWO CASES OF ASTIGMATISM.

A. D., a school-girl, æt. 13 years, was not able to attend to her studies regularly, on account of weakness of her eyes.

Whenever she attempted to read or sew she suffered pain in the eyes, the sight became blurred, and severe frontal headache supervened, which continued for hours afterwards. There was also at such times a decided convergent strabismus of the left eye.

Examination after atropia had paralyzed the accommodation detected in the right eye a hypermetropia of $\frac{1}{2}$ in one principal meridian, and of $\frac{1}{8}$ in the other; and in the left eye of $\frac{1}{2}$ in one meridian and $\frac{1}{8}$ in the other.

She was ordered for the right eye a $+1\frac{1}{2}$ spherical, combined with a $+2\frac{1}{4}$ cylindrical, with its axis at 60° ; and for the left a $+1\frac{1}{4}$ spherical, combined with a $+1\frac{1}{8}$ cylindrical, with its axis at 120° . The glasses completely corrected the strabismus, and entirely relieved the asthenopia.

A. B., a healthy man, æt. 25 years, had been suffering with "weak" eyes six or seven years. Any continued use of them in reading or writing had been followed by fatigue and a burning sensation in the eyes, and sometimes by frontal headache and dizziness.

He had frequently been obliged to discontinue the use of his eyes for near work for weeks at a time. Having lately attempted to use them more than usual, each attempt had been followed by a confusion of vision and dizziness that continued for hours to such an extent as to be a source of great annoyance and distress as he walked the street. This, of course, occasioned anxiety, and had a decided effect upon his health and spirits.

Vision varied very much with the state of his health and strength, and with the fatigue or rest of his eyes.

At the time of examination $V = \frac{15}{LXXX}$. A weak convex glass ($+8\frac{1}{6}$) made distant vision worse, while a $-3\frac{1}{6}$ increased it to $\frac{15}{XL}$, just double.

Suspecting hypermetropia with spasm of the accommodation, the accommodation was paralyzed by atropia. It was then found that there was a hypermetropia of $\frac{3}{8}$ in one principal meridian, and of $\frac{1}{8}$ in the other.

A spherical $+3\frac{1}{6}$ combined with a cylindrical $+1\frac{1}{8}$ with its axis at 75° gave a distant vision of almost $\frac{20}{XX}$ Snellen, and relieved the asthenopia.

INSUFFICIENCY OF INTERNAL RECTI.

E. M. N., a woman, æt. 33 years, complained of disturbed vision, intra-ocular and supra-orbital pain, lachrymation, and general discomfort in the eyes. She said the trouble commenced four months previously, after a miscarriage, in which she had lost much blood. She had never been able to read or sew for any length of time since. She could read only a few minutes at a time, when the letters would run into each other and the page become blurred. Every attempt to use the eyes was followed by pain in the eyes, and headache.

The external appearance of the eyes was natural, and the ophthalmoscope revealed no interior disease. Distant vision was normal, $\frac{20}{XX}$ Snellen. There was no error of refraction, and the power of accommodation was unimpaired.

With vertical diplopia, there was a horizontal separation of images, which it required a prism of 8° , base inwards, to overcome. Prismatic glasses of four degrees each entirely relieved the asthenopia.

She was directed to use them only when obliged to occupy herself with near work, and the elixir of quinine, iron, and strychnia was prescribed.

INSUFFICIENCY OF THE INFERIOR RECTUS.

K. J., a healthy man, æt. 47 years, a clerk by occupation, doing much writing, noticed a blurring of objects, two months since, which continued and increased. There were no symptoms of any constitutional cachexiæ, and he had generally enjoyed good health; but, owing to financial reverses, he had suffered much mental inquietude. When writing on a line, it would seem to move upwards into the body of the manuscript and become lost. In looking at a picture, the title below would become displaced into the details of the cut. When he met a gentleman in the street, there seemed to be two, one taller and behind the other, and

in looking at his face the shirt-collar would appear around the face just below the eyes. He always had to step over two curb-stones.

In reading print, the letters, though at first clear for a few seconds, became blurred, and he lost his place. Looking at a distant light, he saw one image alone, but when a red glass was placed before one eye there were two distinct images, one being red, separated vertically about a foot. When the red glass was before the right eye, the red image was below and slightly inclined to the right. When before the left, it was above and slightly inclined to the left of the vertical meridian.

A prism of 6° , base downwards, before the right eye, or base upwards, before the left eye, fused the images. A pencil held horizontally about 18" in front of the eyes was seen singly except when carried towards the lower margin of the field of vision, when the images were separated vertically. When he looked at a black dot with a vertical line drawn through it, it appeared at first as one, if the eyes were not previously fatigued. After looking at it steadily a few seconds, one image remained stationary, and another moved up the line, the line being prolonged, but remaining single.

A prism of 5° , base downwards, before the right eye, brought the two dots together, affording only one image. When the colored glass was placed before one eye, a prism of 6° was required to fuse the images.

The vertical diplopia showed that either the superior or inferior rectus of one of the eyes was at fault. The greater tendency to diplopia at the lower part of the field of vision limited the disease to one of the inferior recti, and the fact that the image of the right eye was found to be below that of the left fixed it upon the inferior rectus of the former.

He was ordered a prismatic glass of 3° for each eye, base downwards on the left side, and base upwards on the right. The glasses, which gave complete relief from all the symptoms, were ordered to be worn only occasionally, while he was directed to come to the hospital three times a week, to have the induced current applied to the weakened muscle.

FEIGNED DEATH—RECOGNITION BY FARADIZATION.—Professor Rosenthal, of Vienna, has recorded an interesting case of trance detected by faradization in a hysterical woman whose death had already been certified by a country practitioner. It had been found that a looking-glass held to the mouth of the woman did not show any moisture, and that melted sealing-wax dropped on the skin caused no reflex movements. Rosenthal, who was accidentally present, found the skin pale and cold, the pupils contracted and insensible to light, the upper and lower extremities relaxed, the heart's impulse and the radial pulse imperceptible. Auscultation, however, showed a feeble, dull, and intermittent sound in the cardiac region. No respiratory murmurs were audible. All the muscles of the face and the extremities responded well to the faradic current. Although the patient had been apparently dead for thirty-two hours, he thereupon informed the relations that she was only in a trance, and recommended that attempts at resuscitation should be perseveringly followed. On the following day he received a telegram saying that the woman awoke spontaneously twelve hours after his visit, and gradually recovered her speech and movements. Four months afterwards the patient called upon him, and informed him that she knew nothing of the commencement of the attack of lethargy in which she had been; that she had afterwards heard the people about her talk of her death, but had been utterly unable to give the slightest sign of life. Two years afterwards, she was still alive and tolerably well.—*British Medical Journal*.

PHILADELPHIA

MEDICAL TIMES.

A WEEKLY JOURNAL OF

MEDICAL AND SURGICAL SCIENCE.

The Philadelphia Medical Times is an independent journal, devoted to no ends or interests whatever but those common to all who cultivate the science of medicine. Its columns are open to all those who wish to express their views on any subject coming within its legitimate sphere.

We invite contributions, reports of cases, notes and queries, medical news, and whatever may tend to increase the value of our pages.

All communications must bear the name of the sender (whether the name is to be published or not), and should be addressed to Editor Philadelphia Medical Times, care of the Publishers.

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EDITORIAL.

THE MEDICAL CORPS OF THE ARMY.

OF all devilish inventions which the mind of man has sought out, or which the circumstances of life have brought forth, war is simply the most devilish,—turning wealth and comfort into ruin and misery, happiness into blank despair, life into death, and, but too often, man into a fiend, Contravening every law of morality, contradicting every practice of Christianity, it stands the one great monument of man's depravity. Yet it is the basis of modern civilization, the strength of government, the majesty of the law, the very groundwork of Christianity; offering the awful paradox of peace and good will to man resting upon the field of carnage and the place of strife. As Christianity deepens in the hearts of men, as it becomes more and more universal, so, undoubtedly, will war become less and less frequent, until, in the millennium morning, peace and good will shall reign triumphant. Until then, however, we can only lessen the frequency of war and mitigate its horrors.

Probably the world over it will be acknowledged that our country—the United States of America—has done as much as or more than any other nation in both of these directions. The Geneva arbitration, the quiet waiting of the Executive in our troubles with Spain, are recent and most gratifying proofs of the decay of the war-spirit among us. Yet war, as has been said, is an inevitable heritage of man, and the nation that eschews physical force must see the evil triumph over the good, the commune over religion, anarchy over order.

Knowing, therefore, that wars and fightings must come, it is well that we mitigate, as far as may be, their distresses. During our late rebellion those gigantic philanthropies, the Sanitary and the Christian Commissions, taught the world new lessons of charity; but the relief they afforded upon battle-field and in hospital was as nothing when compared with that given by the regularly organized medical corps of the army. Let private charity do what it can; after all, it can only aid and supplement what must ever remain the great relieving agent in the time of war,—the medical department of the army. How important is it, then, that the medical corps should be maintained at the highest possible efficiency, organized in the most thorough manner, its *esprit de corps* raised by the strictest discipline, its *personnel*, which in it is everything, sustained by fresh drafts from the best young talent of the country and by those rewards which are the incentives to continuous labor!

As every one knows, the organization of our army during war is an anomalous one, the so-called "regular army"—the standing army of the country—affording merely a nucleus around which gathers a mighty host—the "volunteers." It is very evident that the latter must be composed of men recently civilians, and that its surgeons must be physicians who are novices in military surgery and the various especial departments of medical science relating to war. Hence it is all-important to maintain at all times a very large "regular" staff,—a body of men drilled in all the requirements of army life, who shall guide, direct, and leaven the general mass in war-time. Doubly important does this seem when the confusion of suddenly organizing large armies, the difficulties of selecting among unknown and untried men those fit for responsible positions, are borne in mind. The superiority of the regular over the volunteer staff is a necessary result of the same laws that render professionals superior to amateurs in any rôle of life,—a result which was very apparent in the last war, when the largest hospitals were commanded by assistant-surgeons of the regular army,—lieutenants in rank and pay ruling twelve or fifteen hundred men,—the stripling holding the command of a colonel. We have neither space nor desire to re-echo the plaudits which the world has long offered to our medical department since its work has been known. Simply let us say that its achievements exceed anything of the sort the world over; and let us in justice add that those achievements had their inspiration, their source, in the staff of the regular army.

Again, as is well known, the effective strength of

an army, the measure of its real power, is often very different from its numerical strength on paper. In keeping men *out* of the hospital the medical corps ought to be of more service to the government than in treating the soldiers in the hospital. The American soldier probably costs more to get into the field than the soldier of any other nation, and it is therefore doubly imperative upon the government to take care of him. It cannot afford to neglect him. Disease is an infinitely more dangerous foe than the cannon-ball and the rifle-bullet, but one that can be to a greater extent guarded against. Any person in the habit of reading the English medical papers will see how this is recognized abroad. Week after week the editorial columns are filled with discussions of the proper methods of meeting the medical difficulties of the Ashantee War, soldiers and civilians consulting together concerning what is said to be "a doctors' and an engineers' war."

It is evident that the preventive treatment of disease in the army involves manifold questions entirely unconnected with civil life; that army hygiene is distinct from civil hygiene; that it is an imperative necessity to maintain a large body of highly-educated, able men who shall devote themselves to the study of the various military medical problems with the steady energy that a man puts into his life-work.

The maintenance of the medical corps of the regular army in the highest possible efficiency is therefore but the dictate of common sense. Yet, some time since the rebellion, Congress, moved by that spirit of penury which loses sight of the distant gold eagle by looking at the penny close at hand, stopped all promotions and stopped all appointments to the medical staff; at one fell blow taking away every inducement of those in the army to stay there, and shutting the door against any who might be attracted by the barren pasturage left. It was well they did both, however. If they had only stopped promotion, the service might have been filled up by the merest incompetents, the best men staying out because they saw no sufficient attraction ahead. It was fortunate, then, that the door was shut, so that to-day there are sixty-four vacancies, even though the government has become a trader in medical services, buying temporary services at temporary prices of any one who can offer them.

We might write at length of the real injustice of shutting off promotion. We might tell of men who had abandoned lucrative positions and sure promotion in civil life, and made settled permanent contracts, because they were needed by their country,—contracts into which entered as an integrant

part the chances of promotion. We might contrast the achievements of the last war and the death-roll—*greater* than that of any *other staff corps* of the army—with the contumely of the present, did not justice seem dead,—did we not believe that any body of men who could have passed the original law simply were devoid of any sense of justice, since the act was a direct *repudiation* of the agreement of the government with those who entered the army. Surely, however, a sense of right still exists among the American people, if not in their representative body; and surely that people, though slow to move, will eventually see that their representatives do right. As we have already said, we do not ask Congress to repeal the present law on the ground of justice, but, in the name of a people over which the war-cloud has scarcely passed, we demand it as a necessity. When war shall come, shall our citizen soldiery die on the battle-fields, in imperfectly provided and governed hospitals, because our country was too poor—nay, rather because Congress was too stingy—to afford the necessary pittance in time of peace? Shall our government continue to huckster in medical services for present wants, buying those so needy, so hopeless, that for a present pittance they will barter all chance of future reward? We trust not. Let every civil physician in the land use his influence in securing the repeal of the bill as asked for by the American Medical Association, and surely even an obstinate Congress—which we trust the present will not prove—will yield to justice, expediency, and the will of the people.

AS is well known, in the "olden time" advertising by the profession was done more freely than at more recent periods. We are indebted to Mr. Malin, the gentlemanly steward of the Pennsylvania Hospital, for the following extract from Poulson's *American Daily Observer*, 1806. The patient alluded to was admitted to the Hospital December 1, 1806, and, on recovering, left the institution April 22, 1807.

"PENNSYLVANIA HOSPITAL, December 27.

"On Wednesday, the 25th instant, a WEN was extracted by Dr. Physick, in the circular room, from the cheek and neck of James Hayes of Dauphin County, in the State of Pennsylvania, in the presence of Doctors Wistar and Cox, Physicians of the Hospital, and about 80 students of medicine from different parts of the Union, who were privileged to attend the practice of the house. This wen had been upwards of twenty years progressing in its growth, and, when extracted, it was measured and weighed.

"The dimensions were as follows:

"Projection from his cheek 7½ inches.

"Circumference round the base 23 do.

"Do. in its largest extent 25½ do.

"Do. in the least part of it 19½ do.

"The weight was seven pounds.

"It is supposed the patient might have lost about ten or twelve ounces of blood. This severe operation he bore with the greatest fortitude, and there is a reasonable prospect of his doing well."

IN a recent number of the London *Lancet* is an editorial upon the subject of International Copyright Law, in which occurs the following passage, which we would commend to the business consciences of some well-known publishers if we thought they had any:

"The reproduction of British works in the United States is of course nothing less than piracy (however disagreeable the word), and the Americans have hitherto stoutly resisted all attempts by both English and American authors to bring about some mutual good understanding."

We say Amen to this. As the *Lancet* afterwards intimates, however, it is not the "Americans," but a ring of publishers, who, strong in their ill-gotten wealth, simply grow stronger day by day through the half- or not-at-all required toil of authors.

PROCEEDINGS OF SOCIETIES.

PHILADELPHIA COUNTY MEDICAL SOCIETY.

A CONVERSATIONAL meeting was held at the hall of the College of Physicians, November 12, 1873, at 8 o'clock P.M.,

Dr. W. B. ATKINSON, PRESIDENT, in the chair.

The paper of Dr. G. HAMILTON (see page 178) was read, and gave rise to the following discussion:

Dr. WM. GOODELL agreed with the author of this admirable paper in the opinion that the virulence and contagiousness of typhoid fever in country towns and villages are in a great measure attributable to the greater impressibility of countrymen. They certainly are not, as suggested by Gendron, owing to small rooms and to the congregation of the whole family in them. For the poor of large cities are, in these and other hygienic respects, far worse off; and yet this disease rarely attacks more than one member of a citizen's family. The peculiar vulnerability of countrymen to miasmatic and contagious influences is well known. It has long been remarked by military surgeons that the raw but healthy recruits from country towns sooner succumb to the diseases and the hardships of a campaign than the pale and unhealthy-looking lads drafted from the shops of a great city. People born and bred in the courts of a city never breathe pure air, and are daily and hourly exposed to morbid influences, which they resist, but which would soon cut short the life of a countryman. Thus it is that in epidemics acclimatized citizens escape, while the recent resident early falls a victim. In this sense there are grains of truth lying

at the bottom of the legend that Mithridates had so accustomed his stomach to violent drugs that there was no poisoning him.

Dr. HAMILTON thought the hazard was much greater on the part of the city, as regards the condition of the privies in reference to their possible or probable agency in the production of typhoid fever. In many places west of Broad Street the privies, if not connected with a sewer, were nearly always full, evidently from some peculiarity of soil permitting the wells to fill rapidly with water, the fæcal substance resting generally upon the surface.

Dr. ESHLEMAN thought that cesspools were generally kept in a worse condition in the country than in the city, and that the disease was more fatal in the country. He had never in the city met with a second case in the same family, or in the vicinity. He regards it in our city, however grave the symptoms, as very amenable to treatment. He relies principally on efficient supporting remedies. He uses two to six pints of milk daily, besides beef-tea, wine, eggs, and brandy in their turn.

Dr. GOODELL asked Dr. ESHLEMAN to describe the cesspools in the country.

Dr. ESHLEMAN, in reply, said the wells were usually of a large size, from four to eight feet deep, and neatly housed. But their contents were very seldom removed or disinfected. He seldom entered them, because of their very offensive odor. He thought it strange that the disease was not more prevalent if human excreta were the source of its origin. He would add that, in seeking the origin of a case which he has at this time under treatment, he discovered that eight days prior to his taking charge of the case, and one day before prodromic symptoms set in, his patient had been exposed to exhalations of a most offensive character, that arose from the emptying of a cesspool in the yard, and which they inhaled during the night and while removing their household goods the next day.

Dr. COHEN inquired what was the drainage of small towns in Dr. HAMILTON's experience.

Dr. HAMILTON, in reply, said that the village in which he formerly resided was finely situated upon the ridge dividing the Brandywine and Red Clay Creek. He had never noticed any condition of the surface that would be likely to furnish miasmata or effluvia capable of engendering disease; though the population, many years previous to his residence there, was more than decimated by dysentery. The cases of typhoid fever were not frequent in the village.

Dr. B. LEE said that he found himself entirely unable to agree with the remark of the author of the paper, that it might have been of a more practical character. He considered no questions more truly practical than those relating to the prevention of disease, and that not until the profession gave a due amount of attention to these questions would it rise to its full dignity and fully discharge its obligations to society. Of the many interesting topics suggested by the paper, he would refer to a few only. As regards the existence of a certain impalpable, undefined, and as yet not understood condition of the soil, as a cause of typhoid fever, he would instance a circumstance which appeared to him to have a very direct bearing upon it. In the neighboring city of Wilmington, about twenty-seven years ago, an epidemic of this disease made its appearance, which was of an unusually fatal character, attacking rich and poor alike, and carrying off many of the most prominent citizens. Shortly before its commencement, the main street of the city had been upturned nearly its whole length (about a mile), for the purpose of introducing new water-mains. The excavations were at least six feet in depth, and remained open for one or two months. No other cause for the outbreak could be assigned, and the physicians of the town were unanimous in ascribing

ing it to this. The disease had never before or after prevailed there as a decided epidemic. In regard to the greater frequency of the disease in its epidemic form, and its greater virulence in the country than in the city, it should be remembered that in the city, however filthy the condition of our cesspools might be, our water-supply was drawn from a distance, and was therefore entirely free from all suspicion of contamination by our own excreta at least; while in the country sufficient pains were not taken to avoid the possibility of drainage from the cesspool into the well, a danger which was especially great in porous soils or where the rock strata dipped towards the latter from the former.

The writer had alluded to infected milk as a source of typhoid fever. This he considered a matter of the deepest moment, and one worthy of close investigation. Milk is a fluid so highly vitalized, so near akin to blood itself, especially when warm from the cow, the condition in which it would be exposed to emanations from diseased persons or infected utensils on the dairy farm, that it formed a most fitting nidus for the reception and development of disease-germs. He desired to ask the author of the paper, as having had opportunities of observing the disease in the country, whether he had ever noticed any relation in point of time between the ploughing-season and outbreaks of the disease in question, as that might throw some light on the theory that the exposure of the soil was capable of producing it.

Dr. HAMILTON stated that the account given by Dr. LEE of an outbreak of typhoid fever of unusual extent and fatality in the city of Wilmington, Delaware, the origin of which was supposed by many to have been the exposure to the atmosphere of a large amount of fresh soil, reminded him of a similar outbreak in Germantown. He had visited in consultation on that occasion a young man in a family where two or three others were affected. He was informed that many other cases existed in that particular portion of the town, and that no explanatory cause presented, unless it might be found in the fact that the cutting down of a hill in grading a street had exposed to the action of the atmosphere and light a very great quantity of fresh earth. Dr. H. had seen nothing to induce him to suppose that freshly-ploughed ground might have an influence in giving rise to typhoid fever.

Dr. G. KERR mentioned an outbreak that occurred in one of the normal schools of the State in the year 1859. Over two hundred young ladies were in attendance. About forty-five were taken with the fever, and a large number of the cases proved fatal. The cases were taken from the school (in which building they also boarded) to their respective homes.

It was noticed at the time that the delicate-looking girls from the city did not seem to be affected at all, whilst the strong, hearty, robust country girls were the sufferers. In one family to which a patient was taken, three more of its members took the same disease, and all four died. Every care was taken to prevent contagion. In this case the house was elevated, thoroughly cleansed, and the members of the family were not permitted to enter the room.

Dr. Kerr's own sister was among the number that took the disease, and was very ill. The entire family was almost constantly exposed in the sick-room. The usual care for ventilation and cleanliness was taken, and no one of their family suffered in the slightest.

The cause of the disease was attributed to the leaking of a pipe leading from the water-closet in one of the upper stories. He did not believe that the turning over of the soil or ploughing has any connection with the disease whatever. He thought that if the effluvium of privies had anything to do with it, the malady would be exceedingly common in this city, where hundreds of the houses are as bad as the privies themselves.

The fact that those who clean sewers are not subject to the disease was proof that this cause had nothing to do with it. Or else, if so, as some affirm, then these persons must have become acclimated, so to speak, to such an atmosphere. He thought perhaps this might be the reason we do not suffer more in cities.

Dr. ATKINSON stated that he very rarely saw any typhoid fever on the "Neck," in the lower part of the city, although the night-soil was spread over the ground in great abundance and in the immediate vicinity of their dwellings. During the epidemic of smallpox there was none among the "Neckers."

Dr. BALDWIN asked Dr. ATKINSON as to the character of the drinking-water in that locality.

Dr. ATKINSON replied that the water was obtained from shallow wells, but did not think there was anything deleterious in it. The soil is diked.

Dr. BURNS said that in his neighborhood, five miles north of Philadelphia, is a large manufacturing town, the greater portion of which is on elevated ground, the Tacony Creek bordering it on the southwest. Here, for the last thirty-five years, he had treated many cases of typhoid fever; at sundry periods there have been epidemics of this disease. In 1865 there were a number of cases in a salubrious part of the town, in two adjoining houses. He attended seven patients in the one and four in the other, all with a grave form of the disease, and all recovered. In the vicinity there were a number of others under the care of neighboring physicians. In endeavoring to investigate the cause or causes of this visitation, Dr. BURNS thought it proceeded from clearing out an old mill-race, the mud of which, being thrown upon its banks, sent forth noxious effluvia, the dwellings being only about fifty yards distant.

At another and later period, there were three cases in a well-appointed farm-house, where no deleterious cause appeared to exist. In this case he thought the morbid influence might have arisen from the storing away of vegetable matter in the cellar, which is very common in farm-houses. He thought the supply of drinking-water was always worthy of consideration, and that there was danger of contamination if the cloacæ were in close proximity. It is difficult to ascertain the cause of this and any other disease. Doubtless there are special causes, and there may be atmospheric and telluric influences, with modifications due to electricity, which have powerful effects in the production of disease. Moreover, the constitution, habits, food, and clothing of the patient have each their share as factors of morbid action.

Dr. F. J. BUCK thought that where intermittent fever was prevalent, as on the Neck, there typhoid fever was not to be found. This he thought might be owing to the congested spleen acting as a revulsive. He thought he had observed an antagonism between the two diseases.

REVIEWS AND BOOK NOTICES.

THE STUDENT'S GUIDE TO MEDICAL DIAGNOSIS. By SAMUEL FENWICK, M.D., F.R.C.P., Assistant Physician to the London Hospital. From the Third Revised and Enlarged English Edition. With Eighty-four Illustrations on Wood. Philadelphia, Henry C. Lea, 1873, pp. 328.

This is a good book, and one which has been well received in its native city, as is proved by the fact that it has so soon attained the honors of a third edition; and yet we regret to find in its prosperity a sure evidence that the average British medical student is as fond of aids to superficial knowledge as his much-commiserated American brother, and seizes with equal avidity upon

"Compendis" which hold out the oft-repeated but always delusive promise of guiding him upon a royal road to learning.

Especially should this encouragement to dilettantism in medical science be deprecated, we think, if applied to the pre-eminent department of diagnosis, as must be the case when our author, as he declares in the preface, has confined himself "to the general rules of diagnosis, and taken but little notice of the exceptions that are met with in practice." Hardly a day passes in the busy practitioner's life during which he does not long for a more thorough and complete knowledge of diagnosis, even although he may have "memorized" the contents of Da Costa's and Barclay's admirable manuals; and yet his problems of disease are no more difficult to solve than those which meet the student at the very outset of his career as a medical man. We suppose a student's guide to geometry, in which the arduous *pons asinorum* and the abstruse forty-seventh theorem were omitted, might have a brief season of popularity among pupils of a low grade; but could it receive the sanction of any faithful and conscientious preceptor?

We have already remarked that the book is a good one; and by this we mean that it is well calculated to educate students into mediocre diagnosticians. Its arrangement is excellent, enabling us to turn at once to the portion of the work applicable to any particular case in hand, and to investigate the value and bearing of prominent symptoms without loss of time. Its usefulness is materially increased by the numerous (often superior) wood-cuts which are employed to illustrate the clear and concise descriptions of the text. The volume is well printed, and exhibits comparatively few evidences of careless writing or proof-reading; although we suspect that the statement on page 153, that oxalate of lime "crystals are octahedral (like envelopes)," might puzzle alike a student of medicine, a disciple of Euclid, and a stationer's apprentice. J. G. R.

AN INTRODUCTION TO PRACTICAL CHEMISTRY, INCLUDING ANALYSIS. By JOHN E. BOWMAN, F.C.S., late Professor of Chemistry in King's College, London. Edited by CHARLES L. BLOXAM, F.C.S., Professor of Chemistry in King's College, London, etc., etc. Sixth American, from the Sixth and Revised English Edition. Philadelphia, Henry C. Lea, 1873, pp. xvi., 339.

This work, which is a handbook for laboratory use, will be found of value to those who wish to make some headway in practical chemistry before taking up the more complete works on the subject. As its title implies, it does not enter into the consideration of theories, but confines itself entirely to practical matters, of which it is a concise and convenient exponent.

A SYSTEM OF MIDWIFERY, INCLUDING THE DISEASES OF PREGNANCY AND THE PUERPERAL STATE. By WILLIAM LEISHMAN, M.D. Henry C. Lea, Philadelphia.

This is a reprint of the English work noticed at length in our columns not long since. We have nothing to add to what was said at that time as to the professional merits and demerits of the book; and it only remains to state that the publisher has done his work in the present instance with his usual good taste and in his well-known style.

BLOODLESS SURGERY (*Irish Hospital Gazette*, November 1, 1873).—Mr. B. Wells Richardson has performed an amputation of the thigh by the bloodless method, compressing the limb with a tight bandage. The operation was that of Benjamin Bell, *i.e.*, by a long anterior flap. Only about one-third of the usual quantity of blood was lost.

GLEANINGS FROM OUR EXCHANGES.

NEURALGIA OF THE ABDOMINAL PLEXUS OF THE SYMPATHETIC.—Dr. A. Seeligmüller, in a collection of observations on the pathology of the nervous system (Halle, 1873), states that a man aged 33, who had been long exposed to cold and wet while employed in some water-works, and had afterwards worked in a white-lead manufactory, suffered from the following symptoms, which returned regularly every four weeks. His face became red, and he had pain in one or other of the lower limbs. While these symptoms were present, he had a violent paroxysm of cough, ending in vomiting of mucus; this was followed by an urgent desire for defecation, attended with spasmodic pain in the rectum and in the whole of the hypochondriac region. The first discharges were normal; afterwards they presented thready masses of the size of a goose-quill. After the stools, the pain extended to the back; and, when it had reached the neck, the feeling of strangulation, vomiting, and spasmodic deglutition, were relieved. The patient then had a rigor; and the paroxysm ceased at the end of twelve hours, with an attack of vomiting, to be repeated on the third day. After this, there was an interval of four weeks, during which the man became rapidly convalescent and presented nothing abnormal on examination. Various plans of treatment only alleviated this condition for a short time. The patient found most relief from a prolonged course of treatment as for tænia and faradization of the large intestine, and at a later date from injection of morphia. The disorder remained essentially unchanged. Dr. Seeligmüller believes that the symptoms were due to neuralgia of the solar plexus, or to a visceral neuralgia affecting some one or other of the abdominal plexus. He does not think that the case was one of lead-colic, because the patient had no symptoms while employed in the manufactory, and there was no lead-line on the gums.—*British Medical Journal*.

PARALYSIS OF THE THREE BRANCHES OF THE TRIFACIAL NERVE.—The same author (*ibid.*) refers to the case of a woman aged 26, in whom neuro-paralytic inflammation of the eye set in after nearly three years of anæsthesia of the left side of the face (this was at first limited to the left corner of the mouth, from which it afterwards spread upwards). The left half of the tongue was thickly coated with a white fur; the right was of a bright-red color; taste was lost in the anterior two-thirds of the left side of the tongue. A two months' course of treatment with the constant electric current (the positive pole being applied behind the left ear, and the negative to the face) produced marked improvement in all the symptoms.—*British Medical Journal*.

TYPICAL NEUROSIS OF THE VAGUS NERVE.—A girl aged 15, says Dr. Seeligmüller (*ibid.*), had suppression of the menses after being violently angry. At the same time, severe pharyngitis set in; and this recurred regularly for two and a half years whenever she had a paroxysm of anger. In the first half-year, she had loss of consciousness, tonic cramps in the hands and feet, and frequent dyspnœa, generally lasting four hours. The cramps and loss of consciousness afterwards disappeared; but she had recurrent paroxysms of enormously increased frequency of respiration,—200 in a minute. Numerous plans of treatment were employed without effect. Dr. Seeligmüller, having ascertained that pressure produced pain at points along the left side of the seventh, eighth, ninth, and tenth dorsal vertebrae, and in the corresponding intercostal spaces, used the constant current, applying the positive pole over the painful parts of the spinal column, while with the negative pole the points where pain was produced were

brought into contact until the pain had ceased. Each point was treated from two to four minutes, thirty or forty large Remak's elements being used. After two months of this treatment, the paroxysms almost disappeared. At a later date, the patient had other nervous disturbances, especially severe pains in various parts of the body. Dr. Seeligmüller believes the case to have been one of neurosis of the vagus nerve, the central end of which was abnormally irritated by inflammation proceeding from the throat. A search for painful points, and the application of treatment to them, is an essential indication in the treatment of all reflex neuroses.—*British Medical Journal*.

SCIATICA FOLLOWING THE CONTINUED USE OF A SEWING-MACHINE.—Dr. Seeligmüller relates (*ibid.*) the case of a woman, aged 50, who, after having worked with a sewing-machine for four years, had tearing pains in the leg with which she worked, extending from the ankle to the tuber ischii. The pain was not felt when she rested, but was brought on by walking or standing. The patient had also a sensation of cold and formication in the affected foot. Continued labor with the sewing-machine produced, besides the pain, loss of muscular power in the legs, wasting of the muscular substance, and a state of great general weakness. As a prophylactic measure, she was ordered to take longer intervals of rest between the periods of work.—*British Medical Journal*.

CASE OF POISONING BY COAL-GAS (*The Lancet*, October 25, 1873).—Dr. F. De Chaumont recently had the opportunity of making post-mortem examinations on the bodies of two persons who died from the effects of breathing an atmosphere saturated with coal-gas. He found extensive ecchymoses of a bright-red color on the dependent parts of the back, arms, and legs; the dura mater on its external surface was much congested; the arachnoid was opaque; the pia mater bright red and injected; cerebral substance bright red, with numerous bloody points in it; a small quantity of serum in the spinal canal; right auricle full of coagulated blood; blood generally fluid; trachea highly congested, containing a moderate quantity of mucus; lungs not much collapsed; aorta closed and crepitant; bronchial membrane greatly congested; bloody, frothy matter issuing in large quantities from the tubes. Remaining organs healthy.

SECONDARY DISEASE OF BOTH PNEUMOGASTRIC NERVES IN THE COURSE OF TYPHOID FEVER.—Dr. Zurlhelle relates (*Berliner Klinische Wochenschrift*, No. 29, 1873) the case of a man who, in the second week of an attack of fever, was seized with severe pain at the level of the cornu of the thyroid cartilage on the left side (and later also on the right), which seriously impeded deglutition. The voice was clear, and remained so. Nothing abnormal could be detected by examination with the laryngoscope or externally; but the pain was much increased by pressure in the direction of the spine. In the further progress of the disease, attacks of vertigo and palpitation set in, while the pulse became irregular and sank to 36 in the minute. Later on, there were frequent attacks of syncope, with clonic convulsions and profuse vomiting. The fainting-fits were diminished by morphia-injections; but, while the temperature was still high, the pulse remained irregular, less than 40 in the minute. Pneumonia of the left side now set in, and with it paresis of the recurrent nerve on both sides, as ascertained by the laryngoscope, and hoarseness. Under the use of iodide of potassium, the violent pain on both sides of the neck at once disappeared; the heart-beats became more regular and frequent, but hoarseness, due to paresis of the left recurrent nerve, remained.—*British Medical Journal*.

INTUSSUSCEPTION (*Irish Hospital Gazette*, November 15, 1873).—Dr. B. G. McDowell details the case of a woman, æt. 47, who on admission to the hospital stated that she had been ill four days, with incessant vomiting, and that during the last two days she had passed blood by the bowels in large quantities. She was very weak and exhausted, the pulse rapid and feeble, the extremities cold, and the surface covered with a dank sweat. During the next three days she grew weaker, her bowels remained closed, the vomiting became fecal, and she finally died.

On opening the abdomen, the large intestine was found to form a solid mass about six inches in length and four in diameter, situated horizontally in the middle line of the body below the stomach. This proved to be due to an intussusception, the ascending colon with part of the great omentum being included in the transverse colon. The contiguous serous surfaces were firmly adherent; the mucous membrane of both the including and included portions was intensely congested, almost gangrenous; the intestines were full of a large quantity of liquid feculent matter. The case is peculiar from the unusual situation of the obstruction.

YELLOW FEVER IN NEW ORLEANS IN 1873—ITS SPREAD ARRESTED BY DISINFECTANTS.—Dr. Alfred W. Perry, Sanitary Inspector of N. O. Board of Health, states (*New Orleans Med. and Surg. Journal*, November, 1873) that yellow fever was introduced into New Orleans, July 4, by the mate of a Spanish vessel from Havana, which arrived on the 26th June, and the disease then slowly spread. "During the first week in August the Board of Health commenced extensive disinfection with carbolic acid of all places where yellow fever had been reported. The disinfection was performed in two different ways,—viz., when a case of yellow fever was reported, all the yards, alleys, and drains in the square were sprinkled with carbolic acid by hand sprinkling-pots; about seventy gallons of the carbolic acid were used per square. This was done to destroy any disease-germs that might be on the ground, and to prevent the spread of the disease-germs over the other parts of the same square. Thirty entire squares and twenty-one half squares where yellow fever had occurred were thus disinfected in the Fourth District, and in only seven of these areas disinfected were there any subsequent cases of yellow fever."

The streets were also disinfected with carbolic acid by sprinkling water-carts. Nowhere in the world, Dr. P. says, has disinfection on so extensive a scale been used. "In sprinkling the streets, about twenty gallons were used to every one hundred yards; this was repeated several times at intervals of five to ten days. The large amount of carbolic acid used made the air of a disinfected locality exceedingly irritating to the eyes, and sometimes produced headache and nausea. These disagreeable effects are due to the naphtha and naphthaline, which constitute the impurities in the crude carbolic acid; these have no disinfecting value, and in future a purer acid should be used, which is not very unpleasant, and equally effective and cheap." He further says that a few cases occurred in Mobile, and the disease was extinguished by the same method.—*Medical News*.

COMPRESSION AS A MEANS OF PREVENTING HEMORRHAGE (*British Medical Journal*, November 1, 1873).—Mr. George W. Callender thinks there are some conditions in which the use of M. Esmarch's plan for the prevention of hemorrhage during operations by encircling the limb or part with an elastic bandage is not desirable. Cases where there is any suspicion of local vein disease are of this class; so, too, are cases in which primary amputation is required for the crushing of tissues, as in such the torn veins are closed with clots

which might possibly be displaced by the compressing bandage, and so pass into the larger vessels, causing embolism; and so also are cases of gangrene or of rapidly extending cellular inflammation. The expectation that the compression might prevent pain has been tested and has failed, but there is no reason to suppose that it engenders risk of the after-sloughing of parts, as of the skin-flaps after amputations. It may be serviceable in quite another direction,—as a compress in the immediate treatment of poisoned wounds. Dr. W. R. Kynsey reports (*Irish Hospital Gazette*, November 15, 1873) three cases in which this method was employed with great success: one of necrosis of tibia, one of amputation of a toe, and an excision of the elbow. There was no loss of blood, no necessity for the use of a sponge, and each structure before division could be easily recognized.

Dr. W. Thomson reports a case (*ibid.*) of amputation of the hand where the best possible results were obtained by the use of compression.

CAOUTCHOU ELECTUARY AS A REMEDIAL AGENT (*New York Medical Record*, November 15, 1873).—Dr. Theodore Varick, after having for fifteen years prescribed caoutchouc in preference to cod-liver oil in certain cases of pulmonary tuberculosis in every stage, in chronic bronchitis, the winter coughs of old people, and in chronic rheumatism, desires to call attention to its use as a remedial agent. It is not claimed that it is a remedy which has any specific action, but that it diminishes excessive mucous secretion and suppuration, arrests hemorrhage and colliquative sweating, and retards emaciation.

Prepared in the following manner, it should be given in doses of a teaspoonful three times a day, about two hours after meals:

R Caoutchouc (in thin slices), $\mathfrak{z}\text{i}$;
Olei terebinthinæ, $\mathfrak{f}\mathfrak{z}\text{ii}$.—M.

R Sol. caoutchouc, $\mathfrak{f}\mathfrak{z}\text{ii}$;
Sacch. alb., $\mathfrak{f}\mathfrak{z}\text{iss}$;
Mellis (strained), $\mathfrak{f}\mathfrak{z}\text{iiiss}$.—M.

When these preparations are mingled, the mixture (containing about two grains of caoutchouc to the teaspoonful) should be of an opaque yellow color and thick enough to run very slowly from a spoon. One hundred parts of caoutchouc contain 87.2 carbon and 12.8 hydrogen, while cod-liver oil contains of carbon 37 and hydrogen 34—; so that should the former be available as respiratory force or fuel it would be of great value.

LATENT SYPHILIS AS A CAUSE OF UNUNITED FRACTURE (*The Lancet*, November 1, 1873).—J. Wilson Steele, M.D., reports the case of a man, æt. 30, who was admitted to the hospital on March 17, suffering from an oblique fracture of the tibia at about the junction of its middle with its lower third. It was easily reduced, put up in two side-splints, and the redness and swelling subdued by evaporating lotions. He seemed to progress favorably, took his food heartily, and slept well. On removing the splints about the usual time, it was found that no attempt at union had taken place. There was no apparent constitutional cause to account for this, and the line of fracture did not run in such a way as to interfere with the nutritious artery of the bone. On April 24 the fragments were put firmly in apposition for the second time. The splints were again removed June 10, with the same result as before. Dieffenbach's method of exciting inflammation in the fragments was then resorted to without delay. On July 29 the pins were removed, having become loosened by suppuration. There was much tenderness at the lower end of the upper fragment, and a large quantity of pus was discharged through the

openings made by the pins. No examination of the limb was made for a few days, lest any callus which might have been thrown out should be disturbed.

August 10.—The limb presented the same sad state of affairs as before; patient restless; appetite much impaired.

August 12.—Considerable conjunctival injection of the left eye; patient feverish and delirious.

August 13.—Patient calm; face and body covered with an erythematous eruption; marked iritis in left eye. He was ordered one-twelfth of a grain of bi-chloride of mercury in combination with ten grains of iodide of potassium three times daily. The effect was very marked. The lymph became absorbed from the eye, the general health improved, and on September 8 he was discharged cured, still persistently denying that he had ever had any form of venereal disease, but admitting that he had been exposed to contagion exactly nine weeks before admission.

MISCELLANY.

A WESTERN DOCTOR OF THE OLDEN TIME.—The late Dr. Morehead was for many years a leading practitioner and medical teacher in Cincinnati. The *Nashville Journal of Medicine and Surgery* discourses of him editorially as follows:

"We first saw Dr. Morehead forty-three years ago, and heard his course of lectures then upon the practice of medicine. Very well do we remember the first Monday in November, 1830. We then entered the Medical College of Ohio as a student. All of the Professors that morning, at nine o'clock, were sitting round a long, wide table, and, commencing at one end, paying fee and taking ticket, the student continued until he made the entire round. To the best of my recollection, each Professor, that morning, got about six hundred dollars. I remember to have thought it quite a princely business, and looked upon those grave philosophers, as I took every one to be, with absolute awe, wondering if they had not descended from the gods, to have attained so wonderful a distinction! I stopped one of them on the street the next day, to beg of him a prescription to relieve a poor man, in my neighborhood, of a hemiplegia, and I had not a doubt but a few cabalistic hieroglyphics of his, on a scrap of paper, would confer on me the power of making my poor friend whole,—that he might leap, with recreated energy, and go on his way rejoicing.

"And now the lectures began. Except Cobb and the obstetrician, each of them sat down on a chair and read his lecture straight along from one end to the other, when, saying "Good-morning, gentlemen," he left, to make way for another.

"Morehead wore black buckskin boots, drawn on over his pantaloons, which were of black plush. I made no doubt that such boots were only for those in the highest walks of philosophy, and wondered if it were possible for any of his colleagues, or of the students before him, ever to attain so sublime a height as to be entitled to such boots as those. I had never seen any like them before, nor have I since. All the

other Professors trudged about on foot to their patients, if at any time they had any; but Morehead, who always had plenty of them, rode an old gray mare, heavy in foal. He was, I remember, quite a hero with the students, for he had "fit his fight" with Drake, and, it was said, got the best of it. The story ran that Morehead had a handkerchief—an old bandana, about the size of a tablecloth—full of silver dollars, which he was taking to the bank, when Drake met him on the street, and let loose upon his head a torrent of the bitterest and most eloquent invective, of the non-expletive kind, imaginable, for Drake never swore. Whereupon, being slow of speech, Morehead fell back on his muscle, and brought down on Drake's head his handkerchief of dollars, with such terrific force as to curl him up on the pavement, deprived of speech and sense, where Morehead left him, and went his way. Drake must have alluded to this conflict, five years later, when he said, in his farewell lecture to his class, in the 'Drake School,' out of taste, I thought, alluding to his 'sland'ers,' as he called his opponents, 'I have tried the pen, I have' (standing on his toes, and striking the desk with his fist) 'I have tried *physical force*.'

"Morehead had his lectures written on small note-paper, and carried the one selected for the day in a thick and rather greasy-looking pocket-book, which he would take from his side-pocket, after taking his seat, untie its fastenings, and, lifting sheet by sheet, read them as one might read a letter aloud at his own fireside. His brogue was terrible, and it was with the greatest difficulty that I could comprehend him. I believe a large majority of the class never tried. I never saw him make but one gesture. He was talking of salivation, and said, 'Some of your patients, hereafter, upon a morning visit, will' (and here he carried his forefinger and thumb to his upper right canine, and motioned as if extracting it) 'will reproachfully say, "See here, doctor."'"

"He had a large collection of pills, plasters, and things, in an old frame building fronting the levee, and a brother, as I understood, who was a 'surgeon,' and who was pretty generally on hand here, and, I remember, prescribed 'searching cathartics,' so popular with his brother. I did not hear that he did any other surgery.

"Dr. Morehead always said that he would prescribe for no one who did not have on a flannel shirt. He would not prescribe for a room-mate of mine until he got one, which was not an easy thing, in the absence of a subscription, for the poor fellow to do.

"Dr. Morehead got married, for the first time, during this winter, and on the night of the wedding the students had a meeting and appointed an 'orator' to congratulate him next day, at his lecture-hour. Sure enough, next day, just as the doctor was taking his seat, at a preconcerted signal the whole class arose, as one man, when our orator, a very tall, gaunt man, with enormous porter-house-steak whiskers, as red as blazes, fired away, and in hot haste was up among the stars, and walking the milky-way as fearlessly as a conjurer

dances on a tight-rope. When he was through, we all sat down, and so did the Doctor, and, leisurely taking out his old leather pocket-book, he untied the string, took out a sheet, and commenced reading, as if nothing in the world had happened!

"When he went to see a patient of whose financial rank he was ignorant, he no sooner entered the room than he asked, pencil and paper in hand, 'Who pays this bill?'

"Twenty years afterwards, we learned from a high source that Morehead, a native of Ireland, had never taken out papers of naturalization; that he possessed, in his own right, in Ireland, two hundred thousand dollars; and that he made and saved two hundred thousand more in Cincinnati, which he took with him to Ireland, where he lived a reasonable lifetime longer, on a magnificent estate."

THE *Lyon Medical* states that on opening, a short time ago, the will of a Mr. D——, the following clause was found: "I request that my body be delivered to the Paris Gas Company, for the purpose of being placed into a retort. I always used my mental powers for the enlightenment of the population at large, and I desire that my body be used to enlighten the people after my death." As cremation is not allowed by law in France, the request cannot be carried out.—*London Lancet*.

NOTES AND QUERIES.

WHAT would be the effect upon the human system of a hypodermic injection of chlorodyne? I ask the question owing to my having injected fifteen minims into a dog,—a *fair-sized cur*,—the effect of which was to completely narcotize him, and he remained so for at least two hours; so much so that if I had not noticed the pulsation of the heart I might have supposed him dead. After his recovery I tried half an ounce by the mouth, which seemed to have but little effect; I then tried one ounce per rectum, with the same result.

Yours truly,

INQUIRER.

Answer.

As the editor of the *Philadelphia Medical Times* has never heard of chlorodyne being used hypodermically, he cannot answer the inquiry. The results of the experiment are certainly quite startling, but are possibly explainable as the conjoint effect of the ext. cannabis and the morphia of the chlorodyne thrown directly into a vein. The resin of cannabis is absorbed very slowly and with difficulty, and hence its action when thrown into a vein would *a priori* be expected to be much greater than when it is taken into the stomach. After all, this is mere guessing: if any of our subscribers have any knowledge on the subject, we would be glad to hear from them, and we hope Inquirer will inquire into the matter by further experiments.

OFFICIAL LIST

OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U.S. ARMY, FROM DECEMBER 9, 1873, TO DECEMBER 15, 1873, INCLUSIVE.

BAILY, JOSEPH C., SURGEON.—Relieved from duty in Department of California, to proceed to Baltimore, Md., and, on arrival, report by letter to the Surgeon-General. S. O. 244, A. G. O., December 8, 1873.

GHISELIN, JAMES T., SURGEON.—Granted leave of absence until June 6, 1874, and his resignation accepted, to take effect June 6, 1874. S. O. 245, A. G. O., December 10, 1873.

PATZKI, J. H., ASSISTANT-SURGEON.—Assigned to duty at Fort Fetterman, Wyoming Territory. S. O. 182, Department of the Platte, December 3, 1873.

PHILADELPHIA MEDICAL TIMES.

SATURDAY, DECEMBER 27, 1873.

ORIGINAL COMMUNICATIONS.

NATIVITY OF PARENTS AS AFFECTING THE FECUNDITY, AND THE PROPORTION OF SEXES IN BIRTHS IN GENERAL, AND IN THE TWIN, ILLEGITIMATE, AND STILL-BIRTHS IN PARTICULAR,

AS ILLUSTRATED IN THE VITAL STATISTICS OF THE STATE OF MICHIGAN FOR THE YEAR 1870.

BY JOHN STOCKTON-HOUGH, M.D.,
Philadelphia.

THE writer in the course of his statistical studies, in seeking facts to support theories, elaborated

from the "Fourth Annual Report (1870) of Births, Marriages, and Deaths occurring in the State of Michigan" (so excellently compiled by Dr. Henry B. Baker), a table exhibiting the effect of native, foreign, and mixed matrimonial alliances upon the proportion of sexes in the births from such unions; particularly the proportion among twin, illegitimate, and still-births.

In this table it will be seen that foreign parents have a larger proportion of male offspring, indicating that they are more prolific than native couples. And when the mother only is foreign, the proportion of males is still further increased; while native mothers with foreign fathers produce the smallest proportion of any.

The object of this paper is twofold: first, to point out these facts, and, in the second place, to explain the proximate cause of these differences.

*Births in the State of Michigan for the Year 1870.**

NATIVITY OF PARENTS.	TOTAL BIRTHS.†			TWINS.‡	ILLEGITIMATE.§	STILL-BIRTHS.¶	PER CENT. OF TOTAL.
	MALES.	FEMALES.	BOYS TO 100 GIRLS.	BOYS TO 100 GIRLS.	BOYS TO 100 GIRLS.	BOYS TO 100 GIRLS.	
Mothers { Native	699	625	104.18	93.70	107.00	200.00	14.86
{ Foreign	1,144	1,098	111.17	171.42	95.00	150.00	6.75
Fathers { Native	1,144	1,098	111.17	171.42	135.00	150.00	6.75
{ Foreign	699	625	104.18	93.70	45.00	200.00	14.86
Both Parents Native	6,463	5,904	107.77	96.00		127.27	
“ “ Foreign	4,483	4,101	109.31	103.84		320.00	
Same American or Foreign State						135.71	
Different “ “ “						450.00	
Total all Nativities¶	13,846	12,726	108.80	107.00	108.10	162.50	

In general, native mothers with foreign fathers produced 104.18 males to every 100 females, which is a smaller proportion of boys than where both parents are native (107.77 male to 100 female); while foreign mothers with native fathers produced 111.17 males to every 100 females, which is a *larger* proportion of males than where both parents are foreign,—viz., 109.31 males to 100 females. Where both parents are foreign, the proportion is 109.31 males to 100 females, while native parents produced only 107.77 males to 100 females, indicating, according to the law already enunciated by the writer, that under ordinary circumstances the greater the proportion of males in births the greater the fecundity.**

The fact of foreign fathers reducing the proportion of males (increasing the proportion of females) below the average, where both parents are foreign, and *even lower than where both parents are native*, is a significant one, which cannot help arresting our attention, and is worthy of careful consideration, pointing as it surely does to a *differential dynamic relationship*†† between the parental combinations.

As foreign parents produce a larger proportion of males than native parents, by our ordinary methods of reasoning we would naturally infer that a native

*Fourth Annual Report of Secretary of State (Hon. Daniel Striker) of the State of Michigan, relating to the Births, Marriages, and Deaths for the Year 1870. Lansing. Compiled by H. B. Baker, M.D.

†*Ibid.*, p. 43.

‡*Ibid.*, pp. 52-3.

§*Ibid.*, p. 67.

¶*Ibid.*, pp. 63-4.

**While it cannot be denied that the number of births in any or indeed in all of these classes is insufficient to warrant us in fixing limits to the proportions in the various differentiations, we do claim that the deductions are in the main well founded, as the figures are called into play merely for the sake of illustrating, and thus corroborating, theories deduced from other sources.

††The Relative Viability of the Sexes; particularly with Regard to the Relative Liability of the Inheritance of Certain Transmissible Diseases, etc., etc. New York Medical Record, June 16 and July 15, 1873, pp. 9.

†† This theory of a differential dynamic relationship was first maintained in an inaugural dissertation (presented to the Trustees and Faculty of the Medical Department of the University of Pennsylvania for the degree of Doctor of Medicine, March 13, 1868), entitled "Prepotency, Sexual Elective Affinity, Non-Congeniality, or the Dynamic Differentiation of the Elements of Reproduction in the Human Species; the Cause of Relative Sterility," by John Stockton-Hough, M.A., M. Chem., of New Jersey; also in the article on Relative Viability, etc., above referred to, and in a paper on "Statistics relating to the Births, Marriages, and Deaths occurring in Philadelphia for the Eleven Years ending 1871,"—Penn Monthly, Philadelphia, September, 1873, pp. 599-620, and Proceedings of the Social Science Association of Philadelphia, September, 1873; also in a paper "On the Temperature of the Sexes—an Indication of Development,"—Philadelphia Medical Times, November 8, 1873, pp. 3; also in a forthcoming work on "The Proximate Cause of Evolution;" also in a paper on "The Cause of Rotation and Nearly Equal Number of Sexes in Births;" also in a paper "On a Certain Anomalous Condition of the Flowers of Zea Mays, as an Indication of the Relative Development of the Male and Female Plants,"—American Naturalist, January, 1874; also in a paper on "The Laws of Transmission of Resemblance from Parents to their Children,"—New York Medical Record, August 15, Part I.; September 15, Part II.; October 15, Part III.; November 15, Part IV., 1873, pp. 16.

coupled with a foreigner ought to produce a proportion of males between these two; but this is not the case, as we have shown, whether we couple the native man with the foreign woman, or the reverse. In the first instance the proportion of males is increased, while in the second instance it reduces it below the smaller proportion; in neither case, therefore, does it fall between the proportion where both are native or both foreign. This fact is a practical proof of the existence of the differential dynamic relationship between the elements of reproduction for which we contend in our theory.

From these figures it would appear that the foreign father has more power to diminish the proportion of males ($109.31 - 104.18 = 5.13$) than the foreign mother has to increase it ($111.17 - 109.31 = 1.86$) beyond that where both parents are foreign (109.31); while the native mother diminishes the proportion ($107.77 - 104.18 = 3.59$) more than the native father (foreign mother) increases it ($111.17 - 107.77 = 3.40$) beyond that where both are native (107.77).

TWIN BIRTHS.

By reference to the table we see that foreign mothers with native fathers had 171.42 males to 100 females in their twin births, while native mothers with foreign fathers had but 93.70 males to 100 females. Where both parents were native, the proportion was 96 males to 100 females, while both parents foreign gave 103.84 males to 100 females; thus following the same law with relation to the proportions in each combination as in the births in general.

In Rhode Island, in the nineteen years ending 1871, there were 853 plurality births, of which both parents were American in 44.5 per cent. (380) of the cases, foreign in 47.9 per cent. (409) of the cases, and mixed in 6.4 per cent. (56); while in the general parentage of all births (1858-1871) 45.34 per cent. were American, 44.76 per cent. foreign, and 9.90 per cent. mixed.

Here we also see that the proportion of plurality cases is greater among the foreign than among the American parents; and this fact, taken in connection with the above, confirms the rule already enunciated by the author,* viz.: the greater the fecundity, the greater the proportion of male births.

ILLEGITIMATE BIRTHS.

It will be seen in the table that native parents have a much larger proportion of males among the births of their illegitimate offspring than foreign parents, though the reverse is the case in the births in general. Foreign mothers have a much larger proportion of male illegitimate children than foreign fathers; thus further corroborating the rule of greater generative vigor of the foreign male.

I have already pointed out some of the causes of the smaller proportion of males among illegitimate

births, in my paper on the Statistics of Philadelphia. In it I have stated the causes to be as follows, viz.:

1. Greater proportion of first children.
2. Less advanced age of the mother.
3. Greater vigor of the father.
4. The presence of a condition incident to menstruation, causing the ovule to be fecundated at an earlier stage of development.
5. Want of stimulated ovarian excitement by previous procreative acts.
6. Immaturity of the woman, the system being exercised by vigorous growth, which is antagonistic to the development of the procreative faculties, principal among which is the maturation of ova.†

Nativity of Parents as affecting Fecundity.

	NATIVE.	FOREIGN.	NATIVE AND FOREIGN.
Minnesota, 1871.‡			
Population (per cent.).....	63.45	36.55	
Parentage of births (per cent.).....	26.38	58.29	7.79
Massachusetts, 1870.§			
Population (per cent.).....	75.70	24.30	
Parentage of births (per cent.).....	41.01	48.33	10.66
Michigan, 1870.¶			
Population (per cent.).....	77.36	22.63	
Parentage of births (per cent.).....	48.20	29.68	11.51
Providence (Rhode Island), 1856-1870.¶¶			
Population (per cent.).....	75.00	25.00	
Parentage of births (per cent.).....	39.96	50.70	9.34
Rhode Island, 1870.**			
Population (per cent.).....	74.60	25.40	
Parentage of births (per cent.).....	43.47	45.48	11.05
New York City, 1870.††			
Population (per cent.).....	55.50	44.50††	
Parentage of births (per cent.).....		78.40	

I believe it is a law that a high degree of fecundity is nearly always accompanied by a high rate of mortality; and we find this point illustrated in the State of Massachusetts. In the ten years from 1862 to 1871, of the children born of American families, 16.47 per cent. died under one year, and 26 per cent. under five years. Of those born in foreign families, 18.13 per cent. died under one year, and 32.79 per cent. under five years. The mortality of the foreigners' children was 10 per cent. greater under one, and 26 per cent. greater under five, than among the children of the natives.§§

STILL-BIRTHS.

Although foreign fathers with native mothers have the smallest proportion of males in their births

† Dr. Henry Hartshorne offers in explanation of this peculiarity the following: In illegitimate births, "where vital energy may be supposed to be above the average (sexual propensity overriding prudence and morals, and thus attesting its own strength), there are three per cent. more than the average number of females." "On the Relation between Vigor and Sex," Proceedings Am. Assoc. for Adv. of Sci., 1872, p. 196.

‡ Vital Statistics of Minnesota, 1871, p. 75. By Dr. Charles Simpson.

§ Vital Statistics of Massachusetts, 1870. By Dr. Derby.

¶ Vital Statistics of Michigan, 1870. By Dr. H. B. Baker, p. xliii.

¶¶ Vital Statistics of Providence, Rhode Island, 1870. By Dr. Snow.

** Vital Statistics of Rhode Island, 1870. By Dr. E. T. Caswell, p. 54.

†† Vital Statistics of Philadelphia, 1873. By Dr. John Stockton-Hough: Penn Monthly, September, 1873, pp. 600-621, and Proceedings of Soc. Sci. Assoc. of Phila., 1873, pp. 20.

‡‡ Percentages of Population, calculated from Gen. Walker's Census Report of the United States, Washington, D. C., 1870.

§§ Dr. Jarvis, Mass. Report, 1873, p. 215, out of Mortality Reports.

* Longevity; or the Relative Viability of the Sexes, etc., etc.,—New York Medical Record, June 16 and July 15, 1873, pp. 297-302 and 353-405; also, in Statistics of Births, Marriages, and Deaths in the City of Philadelphia for the Eleven Years ending 1871,—Penn Monthly, September, 1873, pp. 599-620, and Proc. of Social Sci. Assoc. of Philadelphia, 1873.

in general, as well as in their illegitimate and twin births, yet when we come to examine the still-births we find the rule is reversed, and they have a far greater proportion of males than the foreign mother with the native father. And this *proportion* is increased when we take into consideration the fact of foreign fathers and native mothers having a much smaller proportion of males in the births in general, viz., 104.18 to 100 females.

The foreign father, therefore, would appear to disturb the harmonious relationship between the proportions of the child and the pelvic capacity of the mother more than the native father with the foreign mother. I am inclined to attribute this greater proportion of males in such cases to a disturbance of the harmonious* relationship above referred to, rather than to any appreciable deterioration or decline in the viability of the offspring under the circumstances, though the latter cause may be operative in a slight degree. If the latter cause be operative, it would appear to be a reflection on the native mother, as I have pointed out in another paper,† wherein it was shown that Massachusetts (18 years, 1852-69), with a proportion of only 105.8 males to 100 females in the births in general, had 146.6 males to 100 females still-born, while Philadelphia (11 years ending 1871), with 110.65 males to 100 females in births in general, had but 134.4 males to 100 females in the still-births. I may here repeat "my conviction in regard to the cause of a larger proportion of males (146.6) in still-births in the State of Massachusetts for the eighteen years mentioned, as being due to defective development, which I believe is clearly chargeable to the incapacity of the mothers. Wherever the proportion of males is high in still-births among parents of the *same nationality* who are treated by equally skilful accoucheurs, I am persuaded that it is a reflection on the mothers."

Of course, the proportion of males (200 to 100 females) occurring in the births where the proportion is 104.18 males to 100 females, indicates a much larger percentage of still-births in this class than in the other class, where there are but 150 males to 100 females still-born out of a proportion of 111.17 males to 100 females.

* Dr. Henry B. Baker, in the "Fourth Registration Report of Michigan, 1870," pp. 65-6, gives out an opinion which is corroborative of the view taken by the writer. His opinion is expressed in the following words: "Among physicians it is well known that there is a correlation between many portions of the body, the cause of which is not always apparent. There also appears to be, as a rule, a peculiar harmony between the size and shape of the head of the child and the size and form of the pelvis of the mother. A comparison of Table XV. with Table VII. suggests the question whether there may not be some disturbance of this harmonious relation when the father is of one nationality and the mother is of another."

† Dr. Playfair, in commenting on some of the conclusions arrived at in Mr. Fred. W. Lowndes's valuable paper on the Statistics of "Still-births" (Trans. Lond. Obstet. Soc., 1872, vol. xiv. pp. 283-303, p. 303), says that the results of Mr. Hayser's and Dr. Hamilton's experience and observation indicated "that the number of still-births diminished in exact ratio to the frequency with which the forceps were applied." Dr. Hamilton habitually used the forceps in about the ratio of one in every seven or eight labors, and obtained the unprecedented result of seven hundred and thirty-one consecutive labors without a still-birth. In view of these facts, then, the obstetrician, when engaged to attend a confinement, should inquire the nationality of the parents, and expect to apply the forceps from two to four times as frequently where the parents are of different nationalities, as where they are both natives.

‡ Statistics relating to Births, Marriages, Deaths, and Movement of Population in the City of Philadelphia for the Eleven Years ending 1871, —Penn Monthly, September, 1873, and Papers of Social Science Association of Philadelphia, pp. 24, p. 22.

Where both parents were natives, the proportion of males in still-births was smallest of all, viz., 127.27 males to 100 females; and where they are of the same American or foreign State, the proportion is slightly increased, viz., 135.71 males to 100 females. Where both parents were foreign (often of different nationalities), the proportion of males is increased more than two and a half times, viz., 320 males to 100 females, while parents of a different American or foreign state give a proportion more than three and a half times as great (450 males to 100 females) as where both parents are native. One would easily infer from all the above that the proportion of males in still-births among consanguineous marriages would be reduced to a minimum, at least so far as the harmonious correlation of the cephalic and pelvic parts was operative, however much the viability of the fœtus might be lowered.

Of 137 children who were still-born (in Providence, 1870),‡ 70, or one in 13.40, had American mothers, and 56, or one in 12.82, had Irish mothers.

The effect of a different nationality of either parent from the other on the proportion of sexes and percentage still-born is certainly very remarkable, and I trust statisticians will give more attention to the arrangement of the parent-nativity of children than they have hitherto done, in order that more extensive comparisons may be made in the advancement of biological science.

The United States census of 1870 gives only 99.89 males to every 100 females in the native-born population, while in the foreign-born population there were 117.01 males to every 100 females.

"Examining the records of New York City for 1870, we find that, while the number of *deaths* of natives is nearly double that of foreigners, the number of *births* of children, both of whose parents are *foreign*, is almost *four to one* of those whose parents are both native. For so great a difference there must be a cause. Dr. Nathan Allen§ ascribes it to a deviation from the normal harmony of development of all the organs and functions, owing to unsanitary modes of living amongst women, as well as men, in this country."||

In observing the relative fecundity of foreign and native parents, it must not be forgotten that the foreign element in the population, almost necessarily, in a newly-settled state, is principally of an age capable of reproduction, while among the natives there is a far larger proportion of children and the aged. Dr. Baker, the compiler of the Michigan report, calls especial attention to this point, and I cannot do better than quote his own words. He says, "It appears that the per cent. of all parents to total population was [in 1870] 4.24; the per cent. of native-born parents to native population, only 3.13; while the per cent. of foreign-born parents to foreign-born population was

‡ Dr. E. M. Snow's Report, 1870, p. 56.

§ Trans. Am. Med. Assoc., 1870, p. 381.

|| Henry Hartshorne, M.D., Proceedings of the American Association for the Advancement of Science, 1872, p. 197,—"On the Relation between Vigor and Sex."

8.19. It should be remembered in this connection that the foreign population includes, with slight exceptions, only those of an age capable of reproduction, while the American or native population is made to include all the children of both native and foreign-born parents, making the native population appear very large, and the per cent. of native parents to total native population very small."*

I have already enunciated the law, "the greater the fecundity (single births), the greater the proportion of males,"† and, as we have shown that foreign-born parents have a larger proportion of males in their births than native-born parents, they are consequently more prolific. In mixed parentage, the principle of sexual differentiation would tend to affect the application of this law to the relative proportion of sexes born to such couples.

The conclusions arrived at in this paper, from the theories supported, are as follows:

1. That foreign-born parents are more prolific and have a larger proportion of male children than native-born parents.

2. That where the mother is foreign-born and the father native the fecundity is greater, and the proportion of males in the births, in general, is also greater, and among the still-births less, than where the mother is native and the father foreign-born. It is the mother, then, who principally controls the fecundity.

3. That the begetting of males on the part of the mother requires a more perfect or thorough (developmentally higher) procreative faculty than the begetting of females.

That the begetting of females on the part of the father requires more procreative vigor on his part than the begetting of males.

4. If it be true, as was alleged by Sir James Y. Simpson‡ and others, that the increased proportion of males in still-births is principally due to the greater size of the male foetal head, then the greatly increased proportion of males (from 135.71 to 450) in still-births among children whose parents are of different nationalities, over those of the same nationality, points to a larger brain as the result, and argues much in favor of cross-breeding as a means of improving the stock.

From an examination of the table it would appear that the foreign *father* from his alliance with the native mother is principally responsible for the great excess of males in still-births from such a union, as compared with the number of still-born to foreign-born mothers with native fathers. This view of the matter would seem to indicate that foreign-born fathers propagate greater cephalic foetal development than native fathers, or that the pelvic capacity of native mothers was less than that of foreign-born mothers; probably the latter is principally operative.

2003 WALNUT STREET, PHILADELPHIA, September, 1873.

A CASE OF FALLOPIAN PREGNANCY, WITH RUPTURE OF CYST, AND DEATH IN THIRD WEEK.

BY J. H. CATHCART, M.D.,
Philadelphia.

THE following case may be of interest to the profession, not only on account of its rarity, but also from the extreme difficulty of making a correct diagnosis, and the little benefit to be derived from any treatment.

A few weeks ago, November 8, 1873, about eight o'clock P.M., I was called to see Mrs. H., a fine healthy-looking mulatto woman, about 26 years of age. I found her suffering from a rather severe pain in the left iliac region, which had been present more or less throughout the day,—not bad enough, however, to prevent her from performing her usual household work. This pain had increased in intensity towards evening so as to compel her to send for me.

I found her in bed, lying on her left side, and complaining of the excessive pain in that part. Her pulse was feeble and 98 in the minute, respiration 48 and entirely thoracic. The skin was cool and moist. The bowels had been opened only a few minutes before I saw her. She complained of extreme nausea, but had vomited only once. The mind was clear, and she could converse quite rationally.

I prescribed a slight anodyne, with ammonia and brandy every fifteen minutes, but before the time for the third dose of the anodyne the pain had entirely left her, so it was omitted. I saw her again at nine o'clock, and found her absolutely pulseless, with the body and extremities cold. The heart was beating very irregularly, so that it was useless to count it. The carotids were the only arteries in which I could detect any pulsation whatever. The head was cool and covered by a cold, dewy perspiration. She was somewhat stupid, it being necessary to repeat a question in loud tone to arouse her or receive a reply, though it was always correctly and rationally given. She presented, in fact, the whole *ensemble* of collapse.

I endeavored by all possible means, by stimulating her, by warm applications to the extremities, and otherwise, to rally her, but in vain; though towards eleven o'clock there was a slight increase in the temperature of the skin, and the pulse might be felt at the wrist, but very feebly. Her mind was not so clouded, and she appeared better generally, and inclined to sleep. But, in spite of all we could do, she began to sink, and a few minutes before one o'clock she expired, passing away without the slightest struggle or indication of pain.

I was quite at a loss for a cause for such a sudden end. She had presented no toxic symptoms, neither was there any history of aneurism or heart-trouble. Nor was there anything to draw my attention particularly to the sexual organs: in fact, there was nothing in her previous history or in her present condition fully to account for her trouble.

She had been extremely irregular in her menstrual periods ever since her marriage, which had

* Fourth Registration Report, 1870, p. 41.

† Article on Relative Viability of the Sexes, etc., Med. Rec., June and July, 1873; also, Statistics of Philadelphia, Papers of Philadelphia Social Sci. Assoc., from Penn Monthly, September, 1873, p. 22.

‡ "Sex of Child as a Cause of Difficulty,"—Edin. Medical and Surgical Journal, October, 1844, p. 387, and Gynaecological Works, N.Y., 1871, pp. 307-63.

taken place four years ago. She had had her last sickness but three weeks before the time I saw her. This she told me herself, and was corroborated by her husband, who also informed me that there had been a very slight show the Monday previous. She had complained for several weeks of extreme tenderness on pressure and a constant pain in the region of the left ovary. She had had one child three years ago, and in January last had miscarried when in the third month of gestation.

On a post-mortem examination, which was made thirty-four hours after death, by Drs. Porter and Willard and myself, all the abdominal organs presented a healthy appearance. The cavity of the peritoneum was filled with blood,—more fluid than coagulated,—in quantity more than a gallon and a half. The uterus was retroflexed, the fundus lying fairly in the hollow of the sacrum.

The uterus and upper part of the vagina were removed, and presented a completely bloodless condition. The right Fallopian tube was crooked and contorted; the fringes of the fimbriated extremity are partly adherent, but the orifice is not entirely occluded; the probe of an ordinary pocket-case can be passed up three inches. There are bands of old transparent adhesions between the ovary and extremity of the Fallopian tube, and broad thin bands attaching the right ovary to the posterior surface of the uterus.

The extremity of the left Fallopian tube is in the same condition as that of the right. There are some evidences of previous inflammation between the posterior surface of the left Fallopian tube and the ovary, and there are broad bands connecting the posterior surface of the left ovary and its right extremity with the posterior surface of the uterus. A probe can be passed up the left tube about three and one-eighth inches; at this point there is a partially collapsed cyst, which is vascular with small vessels ramifying on its surface. This cyst is about one and three-eighths inches long by seven-eighths of an inch broad, and is oval in outline. On its upper surface, a little posteriorly and a little nearer its inner than its outer end, is a round orifice, from which projects a yellowish-reddish fringed mass which resembles a clot of blood. It was from this opening that the hemorrhage occurred.

Upon opening this cyst it is found to contain anteriorly two dark-colored soft coagula the size of peas, and a reddish-yellow mass which is rough and shaggy on its exterior. Upon opening the latter it is found to contain a second cavity the size of an almond-kernel; this is lined by an exceedingly delicate, thin membrane, resembling in appearance a serous membrane. No fluid was discovered in it. This cavity, so far as we are able to discover, does not communicate with the orifice from which the blood escaped.

This yellowish mass is undoubtedly a product of conception: when a small portion of it is placed under the microscope, it is found to consist of placental tissue, and the branched villi of the chorion, curved with an epithelial layer, are everywhere visible. At first it was thought that the cells which compose the tissue proper of the villi were in a

state of commencing fatty degeneration; but on a more careful examination this was found not to be the case.

Between the cyst already described and the left side of the fundus of the uterus is a second tumor, which is nearly round in outline, regular in shape, one inch long by three-fourths wide; it is not vascular on its exterior; it is dark-colored, and feels as if filled with a semi-solid substance. Upon opening it it is found to be filled with a soft coagulum of blood, the exterior of which is dark-colored, and the interior is of a Spanish-brown color and has a granular appearance. The fluid portions of the blood have largely been absorbed. There are trabeculae running across, and the lining membrane is smooth. There is no communication between the two cysts, and neither can be entered from the uterine orifice of the Fallopian tube.

Both ovaries are large and healthy, and at the inner extremity of the left one is a large corpus luteum one-half inch in diameter, and the orifice through which the ovum has escaped is plainly visible and only recently closed. There is no corpus luteum in the ovary of the right side.

The uterus is four inches long, and its walls are about seven-eighths of an inch in thickness; the cavity is three and one-eighth inches long, and the cervix is filled by a thick amber-colored plug of mucus. The lining membrane is pale, thick, and spongy, and appears to be covered by a thin, delicate exudation. The microscope shows the mucous membrane hypertrophied, the glands enlarged, and the inter-glandular tissue in a state of proliferation. The muscular constituents of the organ are also enlarged and easily studied in all their detail of structure. The whole organ appears, in fact, to be undergoing a physiological change in sympathy with the process taking place in the Fallopian tube, and resembling closely that which takes place in a perfectly normal pregnancy.

The most important feature of this case is in the early rupture of the cyst: the foetus is undoubtedly under twenty days' development in appearance, and the history of the case would appear to corroborate this age.

Out of a record of two hundred and twenty cases of extra-uterine pregnancy, there are sixty-one occurring in the Fallopian tube, and of those which terminated within the second month there are only four cases reported,—viz., by Langstöff, in *Transactions of the Medico-Chirurgical Society of London*, 1817, vol. viii. p. 502; by Littré, in *Mém. de l'Acad. des Sciences*, for 1702, p. 209; by C. D. Meigs, in the *Medical Examiner* of November 9, 1839, p. 709; and the case of Ollivier (d'Angiers), *Archives Générales de Médecine*, second series, p. 403, mentioned by Bernutz and Goupil in *Clin. Memoirs of Diseases of Women*, New Syd. Soc., 1866, vol. i. p. 236. There is a fifth case reported by Dr. R. P. Harris, of this city, in the *Proceedings of the Pathological Society of Philadelphia*, vol. i. p. 302, in which the cyst ruptured at the fourth week, or about the time there was an attempt at menstruation.

These are the only cases I have been able to obtain any record of in which the rupture took place

so early: so that in the present case the rupture of the cyst is without parallel as to its time of occurrence.

[We would call attention to the exceedingly interesting discussion this paper gave origin to at the Pathological Society, as reported in the current number of the *Philadelphia Medical Times*.—ED.]

ESMARCH'S METHOD FOR BLOODLESS OPERATIONS.

BY W. W. KEEN, M.D.

THE practice of diminishing the amount of blood lost in an operation by elevation of a limb, and by bandaging it before the application of a tourniquet, is nothing novel in surgery. The method lately introduced into practice by Prof. Esmarch, however (see *Philadelphia Medical Times*, November 22, 1873, p. 125), produces an utterly new result, viz., an *absolutely bloodless operation*, as if on a cadaver. The advantages are manifest. Fewer assistants are needed; the parts are not obscured by blood, nor the operator annoyed by the necessity for sponging; the most careful dissections can then be made precisely as if on the dead subject; a prolonged operation involves no more loss of blood than a trifling one; and, more than all, the patient is saved the shock and depression caused by the hemorrhage,—in fact, he has gained, as if by transfusion, the blood that was in the amputated part.

The method being new, I have thought it best to report the following case at once, as the interest lies in the method of operation, and not in the result of the case, though that is, so far, a favorable one.

Edward Lee, æt. 20, of a scrofulous constitution, had caries of the left tibia, at the age of eight, with slight caries in the right tibia, and also in one of his ribs, but recovered completely. Nearly a year ago, following a blow, he had a return of the disease in the left tibia and the tarsus. When I first saw him, last July, he was so exhausted that I scarcely believed it probable he would live two weeks; but under careful attention, good diet, tonics, etc., he improved, till his condition has been quite favorable for the healing of the caries for some months past. After waiting till he began to fail rather than improve, I operated on his leg, December 9, 1873, with the assistance of Drs. Allis, Allison, and Bray, and several students. Dr. Allis administered the chloroform by his new apparatus, which used but three and a half drachms in the thirty-five minutes, or six minims a minute.

I obtained from Mr. Levick, on Chestnut Street below Eighth,* a bandage of pure rubber two and a half inches wide and five yards long, made of four strips hastily but strongly joined together. Beginning at the toes, I applied the bandage up to the middle of the thigh, keeping it on the stretch all the while, and making no reverses, as the elasticity of the bandage removed the necessity. At its upper border I wound tightly around the thigh a rubber tube five

feet long and half an inch in diameter, with a quarter-inch calibre, encircling the thigh four times, and securing the ends by the simple hooks used for dissection. It will be observed that this is a very difficult place to compress the femoral artery, as it lies deep among the muscles. I now removed the elastic bandage, and the leg was as blanched as that of a cadaver. For fear the method might not succeed, I applied a tourniquet loosely around the thigh, above the rubber tube, but found it a needless precaution.

I then cut down upon the bones and examined them with a view to resection, but found the disease far too extensive to admit of it: so I at once amputated by the flap method, just below the tubercle of the tibia. Not a *single drop* of blood was lost up to this time. I used the sponge only once while examining the bone, in order to remove the serum which exuded from the oedematous soft parts. The condition both of the soft parts and the bone was most readily determined by the eye, as they were unobscured by any blood, and the flaps were so pale that they resembled veal in color. Having secured the anterior and posterior tibial arteries and a large muscular branch, I gradually loosened the rubber tubing, when the blood returned to the stump, and some small arteries bled, but not till the last turn of the tubing was loosened, so perfect was the compression. Two additional ligatures on muscular branches were required, and three more were twisted, a little cold water stopping the rest. The total amount of blood lost during this last stage of securing the smaller arteries which could only be discovered by their spirting was less than one ounce.

December 13.—The stump was dressed with pure laudanum for two days, and after that with nothing. So far, not an unfavorable symptom has occurred. No pain or other trouble has resulted from the compression by the tubing. Scarcely any shock followed the operation, and since the first few hours the patient expresses himself as feeling far better than before the operation. He sat up in bed yesterday, three days after the operation.

P. S. December 19.—Delay in printing the case enables me to report that he was out of bed on the seventh day, and all of the wound has now united, except about one and a half inches.

In reply to the criticism of "Unguis" on Esmarch's method, in the issue of this journal for December 13, I beg leave to call his attention to the first two sentences in this communication, which was written before his article was published. The practice of previous surgeons resembles that of Esmarch, but is really totally different in its results. It is the old story of Dromio of Ephesus and Dromio of Syracuse. I venture to doubt whether "Unguis" or any other surgeon ever saw a bloodless amputation or resection before Esmarch taught us how to make it.

* At my suggestion, Mr. L. has made continuous bandages one and a half and two and a half inches wide, of any length.

M. GUÉNIOT reports (*L'Union Médicale*, November, 1873) a case of fatal operation for strangulated hernia in a child three months old.

PHILADELPHIA
MEDICAL TIMES.
 A WEEKLY JOURNAL OF
 MEDICAL AND SURGICAL SCIENCE.

The Philadelphia Medical Times is an independent journal, devoted to no ends or interests whatever but those common to all who cultivate the science of medicine. Its columns are open to all those who wish to express their views on any subject coming within its legitimate sphere.

We invite contributions, reports of cases, notes and queries, medical news, and whatever may tend to increase the value of our pages.

All communications must bear the name of the sender (whether the name is to be published or not), and should be addressed to Editor Philadelphia Medical Times, care of the Publishers.

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SATURDAY, DECEMBER 27, 1873.

EDITORIAL.

TO OUR CONTRIBUTORS.

THE experience of the last few weeks has been of such character, the time consumed in personal interviews and in letter-writing has been of such amount, as to convince us of the propriety of saying a few words from the editorial chair to the contributors to the journal. In the first place, we desire to thank the numerous contributors for the zeal they have displayed in sustaining the Original Department of the journal,—a zeal whose fruits are shown in the fact that the appropriate drawer in the editorial sanctum contains enough original matter to occupy the columns of the *Times* to the middle of February,—a zeal, too, not without knowledge, as the quality of this matter will, we think, testify, when we lay these numerous papers before our readers. An embarrassment which grows out of this most desirable repletion is that some communications must wait publication for a greater or less length of time. We certainly think it only right for the interest of the journal and for the good of the contributors that editorial judgment should be exercised in holding some papers back and pushing others forward. It is evident some memoirs will keep, and some will not keep,—that a paper on the latest novelty will lose its freshness if not put forth at once, while a communication copied from some ancient papyrus, although perhaps no less interesting, and it may be even more important, than the other, can tarry a short time in the editorial sanctum without suffering.

So far as may be consistent with the best interests of all concerned, communications shall, however, appear in regular order; but we earnestly hope that no one will judge our valuation of his communication by the early or late appearance of it.

Again, no young or old author need worry himself about the non-acceptance of his paper, for, at least until further notice, all papers not accepted shall be returned at once.

If our contributors will pardon our boldness, we would ask them to remember the fact that, in this era of high pressure, high-pressure condensation is most desirable; that when an idea is stated clearly in ten lines it is read by ten times as many people, and remembered ten times as well, as if it had been put in a hundred lines.

When a contributor in the city desires to correct the *proofs* of his article, he should always write upon the MS., near the heading of it, "Send proofs to Dr. —, address, so and so." Otherwise, proofs will probably not be received.

The only conclusion we can draw from the very great influx of good original papers is that our contributors share the opinion which we hold, and have expressed before,—that it is possible to build up here in Philadelphia a medical paper which, as an exponent of scientific clinical medicine, shall take rank with any other in the world; which shall be a centre to give consistency and force to medical public opinion, both in its action upon the individual members of the profession, and, what is even more important, in its influence upon the world outside of the profession. Every little while we see evidences that the *Times* is wielding such an influence,—an influence which, although perhaps weak at present, we trust may grow, and be ever used for the perfecting and the exalting of our profession. We are informed that the City Board of Trusts have quietly abandoned their position in regard to the Sunday clinics, and we think our readers will agree with us that Dr. Sly will be for some time more sly and less open in his advertisements than he has been. In order to increase this influence, it is necessary that the circulation of the journal be increased. It is directly to the interest of every contributor that the circle of physicians whom his contribution reaches shall be widened. It is also directly to the interest of every one of our present subscribers that our circulation be increased. The reason our paper is not so large as a London weekly is simply that the subscription-list does not warrant the outlay. The *Philadelphia Medical Times* is to-day one of the cheapest journals in the country,—if indeed it be not the cheapest,—costing the subscriber only an infinitesimal

tesimal fraction over half a cent for a double-column quarto page. In the last six months we believe it has been more extensively quoted than any other American journal, both at home and abroad. We think, then, our contributors and subscribers can conscientiously recommend the journal to their neighbors. We feel that it is the interest of the whole profession of the country to have what it has never had in this country, a popular weekly medical journal comparable to the London papers, representing no interest but that of the general profession. The publishers of the *Philadelphia Medical Times* do not run it with the idea of making money out of it directly,—are willing to spend all they may receive. Will you not, then, induce your friends and neighbors to subscribe for the *Philadelphia Medical Times*, and aid us in reducing the price of the journal to one-quarter cent a page?

LEADING ARTICLES.

PROFESSOR AGASSIZ.

BY the death of Professor Louis Agassiz, which occurred in Cambridge, Mass., on the evening of December 14, this country has suffered a loss of the greatest magnitude, and one which is perhaps altogether irreparable. There remain men equally eminent in some departments of science, men of equal ability as public expounders of scientific truths, and men whose earnest and self-sacrificing devotion to scientific labors cannot for one moment be questioned; but there is probably not one who, combining in himself all these elements of success, possesses, in addition, the skill in observation, the personal magnetism, the noble singleness of soul, the great originating and organizing talent, and the ceaseless untiring energy which characterized Professor Agassiz, and enabled him to become the father of popular scientific education in America, and one of the greatest natural philosophers the world has ever produced.

It is a rare combination of qualities which enables an individual to conduct work requiring exhaustive industry and minute research; to make the broadest generalizations from the results of his own labors and those of others, and at the same time to so impress the public mind with the value of those labors as to draw forth thousands of dollars as contributions to the cause of science. It was through his influence that the government of Massachusetts was induced to appropriate money for the erection and support of a museum of natural history; it was by his advice that the United States Coast Survey

organized expeditions and explorations which have proved to be of the highest practical importance; and it was his zeal and enthusiasm which incited private citizens to assist in defraying the large expenses of those expeditions, and to furnish money and land for other purposes equally dear to him.

Much of his success in these particulars was undoubtedly due to his quick, sympathetic temperament, his native tact and eloquence when discussing any subject on which he felt deeply, and his remarkable self-denial in the pursuit of that science to which his life had been so thoroughly and completely devoted. There are few instances, apart from those of religious fanaticism, of such utter abandonment of ordinary aims and ambitions, and of such intense concentration of all mental and physical energies upon one idea; but with Prof. Agassiz the breadth, scope, and comprehensiveness of that idea raised him far above the level of all fanatics, whether religious or scientific. Although his opportunities for turning his knowledge and reputation to pecuniary profit were many, he invariably and consistently refused to embrace them, partly because he felt that he had "no time to make money," and partly because he was unwilling to overstep by a hair's breadth the strict limits within which he knew himself to be unquestionable authority. It was chiefly for the latter reason that he refused on one occasion to visit a tract of land situated but a day's journey from Boston and owned by a company engaged in an honorable and reliable undertaking. He would have been asked merely to certify to well-known and authenticated facts, and thus add the weight of his name to the venture; but he declined, though conscious that in doing so he lost a ten-thousand-dollar fee, because, as he expressed himself in conversation, he felt that there were others whose labors and studies had better fitted them to give an opinion entitled to respect. While thus prompt to refuse to go beyond his self-appointed sphere of thought and action, he was equally prompt to resent interference from those whose knowledge and researches he knew to be superficial and limited; and any suspicion of imposition or falsehood was sufficient to excite in him the most profound contempt. Thoroughly honest in all his convictions, making no effort to appear what he was not, and never influenced by any but the most upright and conscientious motives, he despised all hypocrisy in others, and above all in those who prostituted science to what he considered mere personal aggrandizement.

He was not, however, quixotic in his ideas, nor did he imagine that all men should conform to one

standard, or be devotees to abstract truth; but, on the contrary, he held in great respect all honorable success, either commercial or professional.

Having once deliberately chosen his position in an argument or controversy, he was slow even to obstinacy in yielding an inch to an opponent; and his bitter opposition to Darwinism is scarcely less memorable than his pertinacious defence of his celebrated glacial theory, and of his claim to priority in its origination. Although he let slip few opportunities of expressing his uncompromising hostility to the doctrine of evolution, he never made the mistake of confounding the theory with the theorist, and he invariably spoke in the highest terms of Mr. Darwin. On one occasion, while delivering a chatty afternoon lecture on shipboard, after having spent some days in cruising among the Galapagos Islands, one of the scenes of Darwin's early labors, he alluded to the impossibility of visiting that region, or, indeed, of approaching any scientific subject at the present day, without thinking of that gentleman, and sincerely and heartily eulogized him as "a keen observer, an indefatigable laborer, an honest, conscientious, and pains-taking investigator, and one of the most lovable of men."

He valued highly the opinions of those whom he knew to be his peers in the scientific world, but, as a rule, entirely disregarded all criticism of himself or his doings, whether favorable or the reverse.

His personal appearance was of the most prepossessing character, and his manner cordial, good-humored, and markedly free from constraint. He was somewhat under the medium height, with a massive head, bent slightly forward, and resting on a thick-set sturdy frame. His keen bluish-gray eyes always had a laugh lurking in their depths, and never failed to show a kindly and affectionate interest in those who approached him for help or sympathy. His hands were sinewy and firm, and so educated to precision and accuracy of movement by many delicate dissections that at the age of sixty-five he shaved his face daily without the aid of a glass, never omitting to do so even while at sea during decidedly rough weather. His manner took no note of social rank or station, and he was equally affable to an admiral or a common seaman, to a prince of the blood or a fish-huckster.

He was always ready and pleased to impart information to any one seeking it in the proper spirit, and did so in the clearest and most charming manner imaginable, making the dullest subject seem interesting, and investing it with a more extended significance by some illustrative or cognate fact.

His command of language was remarkable: he

could deliver an extemporaneous address in either French, German, or English, rarely hesitating for a word; and though when he used the latter tongue a slight foreign enunciation was observable, it could hardly be called an accent.

There is space for but a brief account of his life, the general outline of which is familiar to nearly all educated Americans. Louis John Rudolph Agassiz was born at Motiers, Canton of Neuchâtel, Switzerland, May 28, 1807. He was of Huguenot descent, and his lineal ancestors for six generations were clergymen, his father being pastor of the Protestant parish of St. Imier. His mother, who was the daughter of a physician, commenced his education, which was at first intended to fit him for the ministry, but was subsequently, owing to his strong natural inclination, directed towards the study of medicine. Indeed, in later life, although he never spoke disrespectfully of the clergy as a class, he said with much feeling that they were the most determined and obstinate adversaries with whom he had had to cope in his struggle for popular scientific education, and it seemed evident to at least one of his hearers that he compared the professors of theology rather unfavorably with those who cultivated the more exact sciences. His studies were continued at the Gymnasium at Biel and the college at Lausanne, after leaving which he went to the medical school at Zurich, and thence to the University of Heidelberg, where he studied anatomy and physiology under Tiedemann, zoology under Leuckart, and botany under Bischoff. He seemed always to retain his affection for this university, where, although it was not his *alma mater*, he won great distinction as a student, and recently he recommended it as the most pleasant of the European colleges for scientific labor.

At the age of twenty he entered the University of Munich, studied under Oken and Martius, made investigations in the embryology of animals with Döllinger, at whose house he lived, and began the publication of brief treatises on special subjects. On the return of an exploring expedition from Brazil he was appointed to compile for publication the discoveries relating to fishes, and after engaging in this work he abandoned the Æsculapian art, having graduated as Doctor of Medicine at Munich and obtained the degree of Doctor of Philosophy at Erlangen.

During his studies in Paris in the investigation of fossil fishes he became acquainted with Cuvier, whose influence upon him is said to be discernible in many of the views with which Agassiz was afterwards identified. It was doubtless about this time also that he

acquired the familiarity with the contents of the European museums of ichthyology, which enabled him all his life after to say with almost absolute certainty how many duplicates of any particular specimen were in existence, and what was their precise condition and state of preservation. He was almost the sole author of the science of fossil ichthyology, his great work upon which he was enabled to publish through the liberality of Baron von Humboldt. This was followed by his work on the fresh-water fishes, by the *Nomenclator Zoologicus*,—an index of names and classification for the entire animal kingdom,—and the *Bibliotheca Zoologiae et Geologiae*, containing a list of authors on natural history subjects, with critical notices of their writings. Professor Agassiz himself attributed his success partly to his intimate knowledge of the manner of working of his predecessors and the results obtained by them, and frequently remarked that students generally, and particularly medical men, were too apt to consider as useless whatever was a little antiquated or out of date.

In 1837 he propounded his glacial theory, one of the most original conceptions in the whole arcana of science; and ten years later he published his *Système Glacière*.

In 1846 he came to this country, and the following year accepted the chair of zoology and geology at Harvard; and thenceforth he spoke of himself, and was proud to be considered, as an American.

Although he was the constant recipient of testimonials and offers from abroad, he absolutely refused all, preferring to remain among the friends with whom he had become identified, and in a country he so greatly honored by his labors. In 1848 he went to Lake Superior, and in 1850 to the Florida Reefs, both journeys being productive of most valuable results. In 1865 a Boston merchant defrayed the expenses of his celebrated expedition to the Amazon River, during which thousands of new species were discovered, and the museum at Cambridge was enriched by many valuable additions.

In 1871 Professor Agassiz left Boston, in the *Hassler*, a vessel equipped by the United States Coast Survey for the purpose of taking deep-sea soundings, and furnished through private liberality with the means of securing and preserving zoological specimens. This was probably his most important expedition, as it was certainly, in his own opinion, the most interesting. His success in collecting was wonderful, and probably about one hundred and fifty thousand distinct zoological specimens were sent home during the cruise, three thousand five hundred gallons of alcohol being used in their

preservation. The figures are interesting, as illustrative of the scale on which he always worked when not hampered by want of means. He had hoped to announce the importance of this collection within a twelvemonth, and had already devoted considerable attention to the family of Selachians, studying with great care their modes of dentition and characteristics of growth and reproduction. His generosity with money was almost princely, and no price was too high to pay for a coveted specimen; yet all his life long it displeased him to see any one waste a scrap of writing-paper, and his manuscript was always finely and closely written, with no blank lines or spaces. He was unable to forget the times when his income was five hundred dollars a year, half of which went to artists for drawings, one hundred and fifty more being expended for books, and the remainder devoted to his personal expenses. In those days he was compelled to economize even his writing-paper, and thus formed a habit which he never outgrew. During the Hassler expedition it was very observable that in all countries the mere name of Professor Agassiz was sufficient to insure marked attention from every one, and individuals of all ranks and classes proved themselves not only willing but eager to give him every possible assistance. His sixty-fifth birthday was celebrated in the heart of the Andes, a mile above the level of the sea; and on that day he seemed so well and so full of health and vigor, that the wishes of "long life and continued success," though destined to be unfulfilled, seemed far from unreasonable. He considered that the result of the Hassler voyage was to place the Cambridge museum "actually in advance of all existing institutions in zoological researches."

On his return, with but a very brief interval, he commenced the foundation of a natural history school at Penikese Island, which was presented to him for that purpose, together with a large sum of money, by a New York gentleman. The primary object of this undertaking was to encourage teachers to dispense with books and employ natural objects in giving instruction, and its success seemed almost assured.

He had suffered for some time with brain-trouble,—according to his own views, a chronic inflammation of the *crura cerebri*,—which was invariably aggravated by excitement or over-exertion, either mental or physical. His weighty responsibilities and diversified enterprises, added to the intense and eager interest which he always took in any pursuit in which he was engaged, perhaps hastened the fatal conclusion of his labors. At his death he was a member of the French Academy of Sciences, of the

Royal Society of London, and of our own National Academy of Sciences. He held the Monthyon prize and the Cuvier prize from the Paris Academy, the Wollaston medal from the Geological Society of London, and the medal of merit from the King of Prussia. The Edinburgh and Dublin Universities had conferred their degrees upon him.

In special departments of natural science he has probably been excelled by not a few; but taking the whole round, including zoology, geology, palæontology, and their allied subjects,—embryology, comparative anatomy, etc.,—he had attained a uniform degree of eminence which has been rarely, if ever, equalled. As a public lecturer he seldom failed to kindle in others the enthusiasm which glowed within himself, and his success gave an impetus to science in this country which it had never before received. Certainly no one ever brought to any occupation a more profound sense of its grandeur and nobility, a loftier estimate of its relations to mankind, or a more steadfast purpose to consecrate his whole life to it, than did Professor Agassiz to the study of nature; and his feeling of reverent humility is frequently noticeable in his writings. "Even though we can make ourselves conscious that the works of nature are built by mind, and that it has pleased the Maker of all things to give us a spark of that life which makes us to be His children, formed in His image, that evidence is nowhere stronger than in the fact that our mind is capable of studying those works to a limit which approaches to a comprehension of their wonderful relation to one another."

In his daily intercourse with his family and friends Professor Agassiz was simply faultless; and in tone, manners, and deportment he was everything that befits the perfect gentleman. No one who knew him could fail to love, respect, and venerate him, and to feel his death as a personal loss and affliction; but he has been mourned over the whole land with a sincerity which shows how high a place he had won in the hearts of the people of his adopted country.

"His life was gentle, and the elements
So mixed in him that Nature might stand up
And say to all the world, *This was a man.*"

J. WM. WHITE, M.D.

ICE IN THE TREATMENT OF FACIAL NEURALGIA.—M. Wenteritz reports a case of very intense facial neuralgia, which resisted every mode of treatment, that finally yielded to the application of ice along the affected side of the face, laid on at periods of five minutes. The pain disappeared in twelve hours, and, after an interval now of ten months, has not returned.—*Med. Press.*

CORRESPONDENCE.

SOME LATE MEDICAL ATROCITIES.

MR. EDITOR,—In your issue of December 6 you use this very significant expression: "Whither are we drifting?" Echo answers, Whither? You have just indulged in a grand scolding of the Board of City Trusts with reference to certain exactions which this grave body desires to impose upon the Medical and Surgical Staff of Wills Hospital for the Treatment of Diseases of the Eye and Ear, in regard to keeping the dispensary open on the Sabbath. I am rejoiced to learn that the staff have rebelled against such a presumptuous assumption of power without any conference upon the subject with the gentlemen concerned, and that you have struck a blow under the fifth rib, so well merited in every case of this kind. Usurpation of trust or power should always be pointedly rebuked. It is high time that the managers of our charities should know how to treat their medical officers; it is too commonly the case that they consider them as their servants, instead of their equals, or superiors: to regard them in any other light than the latter is simply an outrage. Whatever concerns the interests and the dignity of a medical charity is as much the business and the right of the medical and surgical staff as of the Board of Managers, however exalted their social or political status. There should be the most perfect good feeling between the two boards; and any attempt at a display of superiority of the one over the other, or an assumption of power that does not properly belong to either, should be promptly rebuked and discountenanced. The physician is not a servant, but a gentleman; not the subordinate, but the equal, in every essential particular, of any member of any Board of Managers whatever under whom he may hold office.

But I find that I have unconsciously digressed from the subject to which I desire more particularly to call the attention of the reader. I allude to certain recent professional atrocities, of so glaring a nature that it is quite surprising that they should not have received merited rebuke and condemnation. We may well ask, "Whither are we drifting in the practice of our profession?" When Madame Roland was dragged to the scaffold, she was heard to exclaim, "O Liberty, how many crimes are committed in thy name!" and the same language is, I am sure, justly applicable to some recent professional novelties, introduced for the special purpose of torturing human beings and bringing disgrace upon the art and science of medicine and surgery. What, for instance, could be more revolting and diabolical than the insertion of the hand and the whole of the forearm, as high up as the elbow, of a big-fisted son of Æsculapius into a poor woman's bowel, to explore her pelvic organs, or to tickle her solar plexus when she has swallowed an overdose of chloroform or some other narcotic poison? Look for a moment at the operator as he is about to engage in this invention of the devil. He deliberately takes off his coat, rolls

up his shirt and flannel sleeves, oils his limb, and then begins the work of insinuation, expanding first the sphincter muscles of the anus, and then going higher and higher, until his fingers touch the diaphragm, pausing meanwhile to take a full breath, to feel about for something, God knows what, and then tickling, in real earnest, the great sympathetic nerves. Can there be anything more outrageous or more disgusting than such a performance? What necessity is there for such a feat? Cannot the same ends be attained by stimulating applications to the spine, the use of the galvanic battery, flagellation, cold affusions, the insertion of ice into the rectum, and other means? In a case of chloroform-poisoning recently treated by this method, the shameless operator carried his hand four inches above the umbilicus, or a distance of sixteen inches from the anus, and, not content with tickling the diaphragm, ran his fingers against the walls of the abdomen, so that an assistant could distinctly feel them on the outside, and then, as he withdrew the limb, he must needs carry the hand around the uterus and its appendages in search of displacements and fibroid tumors, although such manipulations were entirely foreign to the nature of the case. Then the operator, we are told, as if in ecstasy at his achievement, withdrew his hand, which was not in the "least stained with blood," and found, apparently much to his gratification, that the greatest dilatation of the anus was only ten inches in circumference, corresponding strictly to the size of his delicate forearm. *Jam satis—ohé!*

To Professor Simon, of Heidelberg, belongs the honor of having suggested and first practised this grand operation, "this great advance which this method of exploration has made within a few years past." The word *advance* is certainly well applied here. The process is an *advance*, but not, in this instance, in the *right* direction. Already it counts a number of victims; and, as it is just beginning to attract attention on this side of the Atlantic, we shall soon hear of cases of laceration of the bowel, of fatal peritonitis, and of permanent paralysis of the sphincter muscles of the anus, occasioned by its reckless employment.

The propitious winds have just wafted to us from the other side of the Atlantic an account of another diabolical procedure. Dr. Bouchard, of France, declares that all organic strictures of the œsophagus should be treated by forced dilatation, in the same manner as strictures of the urethra. For this purpose he uses what he terms his *cornual* sounds, the only inconveniences from the employment of which are, it is asserted, the pain and nausea which they produce! It seems that this illustrious savant has had frequent occasion to use this method, and that he has not failed in a solitary instance in restoring the calibre of the œsophagus to a sufficient width, no matter how narrow, hard, or old the obstruction may have been. We cordially congratulate this accomplished surgeon upon his success. It must be a great consolation to this class of sufferers to know that an effectual mode of treatment has at length been discovered for their relief. May we not hope that ere

long some adventurous American surgeon may replace the cornual sound of his French *confrère* with his hand and forearm boldly carried through the stricture into his patient's stomach? We think we already perceive "coming events casting their shadows before them." Would to God that Molière would rise from the dead and assist us in working out these great problems of "advance" in medicine, midwifery, and surgery! "Whither," Mr. Editor, "are we drifting?"

UNGUIS.

PROCEEDINGS OF SOCIETIES.

PATHOLOGICAL SOCIETY OF PHILADELPHIA.

THURSDAY EVENING, NOVEMBER 13, 1873.

THE PRESIDENT, DR. WILLIAM PEPPER, in the chair.

DR. JAMES TYSON presented a *hydatid cyst* and prepared slides of *echinococci* from the fluid of the cyst and from the germinal membrane lining its interior. The cyst, about one-half inch in diameter, was taken from the anterior border of the right lobe of a *cirrhotic* liver, from the effects of which the patient, a man, aged 32, had died. He had been a drunkard, and was admitted to the Philadelphia Hospital October 4, 1873, with diarrhœa, œdema of the legs, and hydrothorax, but no ascites or jaundice. The limits of the liver's dulness were—in the mammary line, the seventh rib and the free edge of the ribs; in the axillary line, the ninth rib and the free border. Posteriorly, dulness began at the eleventh rib, but the inferior border of the liver could not be determined.

The hydrothorax rapidly increased, and correspondingly dyspnoea. His extremities were always cold, and pulse very feeble. There was no response to remedies, and he gradually grew weaker, dying October 26. Immediately before death dyspnoea was so great from hydrothorax that it was at one time proposed to perform paracentesis thoracis as a palliative; but in his exhausted state it was thought best to omit it. It is likely, however, that his life would have been prolonged some hours at least.

At the *autopsy* fifty-four ounces of fluid were found in the right pleural cavity, and sixteen ounces in the left. The liver, as stated, was *cirrhotic*, weighing two pounds eleven ounces. The other organs were healthy.

A curious fact was observed with regard to the *hydatid cyst*. When removed from the body it was perfectly flexible and membranous, and its walls presented the usual microscopic structure,—layers of transparent homogeneous membrane apparently of albuminous composition, and innermost the germinal membrane with millions of the larvæ attached and falling into the fluid contents of the cyst. The latter was placed in alcohol for preservation, and when removed was found to be hard, exceedingly friable, and breaking under the finger like the shell of an egg.

The *echinococci*, when removed, were perfect spheres with the ring of thirty-four hooklets inverted, and filled, moreover, with what appeared to be granular and globular oil. As the result of osmosis, however, the forms of many had changed, the head being extended and posterior extremity protruded, producing a length of $\frac{7}{8}$ inch, while that of the spheres ranged from $\frac{1}{16}$ to $\frac{1}{8}$ inch. A very marked difference in the appearance of the larva also presented according as the head and row of hooklets were viewed from the front or in profile. In the former instance a mere ring of hooklets

is seen; in the latter a neck-like constriction connects the head or convexity carrying the hooklets with the remainder of the sphere. No cysts were found elsewhere in the abdominal cavity.

Dr. C. B. NANCREDÉ referred to a degenerated hydatid cyst which he had presented through the late Dr. Mustin in 1870. The nature of the cyst was shown by the presence of hooklets, but there were no echinococci.

Dr. R. M. BERTOLET recalled a specimen of multiple hydatid cyst presented by Dr. J. H. Hutchinson, February 23, 1871. In this case there were several cysts in the liver, and a large cyst was found in the connective tissue of the pelvis.

Dr. MORRIS LONGSTRETH said that the remains of this cyst were still preserved in the Museum of the Pennsylvania Hospital, and that the walls had undergone the same peculiar apparently inorganic change on being placed in alcohol.

Dr. BERTOLET said hydatids were very commonly met abroad, and that one could scarcely attend a pathological lecture in any of the larger cities without seeing one or two specimens upon the table among the accumulated pathology of a couple of days. He recalled an occasion on which Professor Virchow had detected with great glee a cyst on the posterior surface of the larynx, which his assistant had overlooked, and remarked, further, that it was the first hydatid cyst he had met in this situation.

Dr. JOHN H. PACKARD exhibited a *specimen of tumor of the humerus*, removed, by disarticulation of the bone at the shoulder, from a patient in the Episcopal Hospital. W. B., æt. 19, the son of English parents who are living and in good health, had always been perfectly well, and had done very hard work at the "squeezer" in a rolling-mill at Pottsville, until about eighteen months ago, when he strained his right arm, and had in consequence an arthritis of the shoulder. This yielded readily to treatment by Dr. J. T. Carpenter, of Pottsville, and he returned to his work. In June last, however, the upper part of the arm began to swell, and became painful, but not severely so except at times; the pain seemed to run down the arm. As the tumor steadily increased in spite of treatment, Dr. Carpenter sent him down to the Episcopal Hospital. On his admission, October 28, the upper arm was the seat of a tumor nineteen inches in circumference; there were in reality two tumors, one beneath the deltoid, and the other, much smaller, at the inner side of the bone. The skin, although deepened in color by repeated blistering, was sound and non-adherent; a good many veins were seen in it. No pulsation, thrill, or *bruit* could be perceived in the tumors. Motion of the joint, whether passive or active, was perfectly free, except as the bulk of the tumors interfered with it. The man's general condition was good.

On the 3d of November Dr. Packard removed the limb at the shoulder, in the presence of Drs. J. T. Carpenter, W. B. Page, and W. R. Cruice, with the resident staff of the hospital. The operation was rendered quite difficult by the close proximity of the outer tumor to the joint; it was done by Larrey's method, the vessels being tied as they were cut, and the inner flap being formed last, so that he could grasp the vessels in its substance until a ligature was placed on the brachial artery. None of the soft tissues external to the periosteum seemed to be in any degree involved. The subsequent course of the case was satisfactory, the man's recovery being uninterrupted.

On making a section, it was found that the adventitious growths had been formed beneath the periosteum, encroaching somewhat on the shaft-walls of the bone by a sort of cupping of its substance, especially perceptible where the tendon of the deltoid was pushed outwards and downwards into a curve. The substance of

the tumors was soft, and so extremely dark as to give at first the impression that they were melanotic; fine spicula of bone radiated outwards through each of them.

A hasty microscopic examination of portions of the adventitious structure, under a magnifying power of about three hundred diameters, disclosed many free nuclei, and nucleated cells of very great variety of shape, but all elongated, and many caudate or bipolar. Unfortunately, the specimen was early placed in a solution of carbolic acid so strong as to destroy its value for further microscopical study.

Except in the age of the patient, and the rapidity with which the new formations progressed, this case corresponds somewhat closely to the descriptions given by various writers of "periosteal sarcoma" or "periosteal osteo-sarcoma."

Pemberton ("Clinical Illustrations of Various Forms of Cancer," p. 74, and Plate III.) gives a case very similar to the one now detailed, but at a more advanced stage, the skin having given way and the tumor having acquired an enormous size.

Bryant ("Practice of Surgery," Am. ed., p. 817) gives a cut of a tumor of the upper part of the tibia, very closely resembling the one in question. He remarks that in proportion to the amount of bony matter entering into the structure of these tumors may they be regarded as innocent, and makes the statement, borne out by the present case, that "the disease is usually seen attacking the ends of the shafts of bones, and not the epiphyses." Wilks ("Pathological Anatomy," p. 35) expresses the same opinion.

Billroth ("Lectures on General Surgical Pathology and Therapeutics," Am. transl. by Hackley, p. 602) says, "Peripheral osteo-sarcoma or periosteal sarcoma (osteoid-chondromata of Virchow) are quite malignant; they either have granulation-structure with osteoid tissue as in osteophyses, and are partly ossified; or they are very large-celled myxo-sarcomata, also partly ossified. The rapidity of their course varies greatly; sarcomata of the lungs have been observed after them."

Gross ("System of Surgery," vol. ii. p. 897) regards these growths as malignant. Erichsen also ("Science and Art of Surgery," Amer. ed., vol. ii. p. 191) speaks of them under the name of "peripheral cancer."

Other writers on surgical pathology speak of these growths, but Dr. P. has found no description more full and accurate than those now referred to.

Dr. J. H. CATHCART presented a specimen of *Fallopian pregnancy, with rupture of the cyst in the third week*. (See Original Communication in current number of the *Times*.)

Dr. JOHN S. PARRY asked how long the lancinating pain had existed in the lower part of the pelvic cavity.

Dr. CATHCART replied that the patient had the pain only on the day she died.

Dr. PARRY said he had asked the question because he considered these periodical pains often of diagnostic value. Physicians have for a long time been unable to diagnosticate with certainty the existence of extra-uterine pregnancies. He thought, however, that there was a series of symptoms which would enable one in the main to predict such a condition. For the space of six or eight weeks after conception there are noted the usual signs of pregnancy, and there are no symptoms of the anomalous condition. After this period, however, the patient will complain of exceedingly severe attacks of pain in the pelvic region, radiating sometimes over the whole abdominal cavity. This is often mistaken for the pain of an uncomplicated cellulitis or pelvic peritonitis, and in a recent case which had come under his observation several physicians of experience had diagnosticated these conditions. This pain is periodical in its occurrence,—every two or four weeks. It is

exceedingly severe, and often produces profound collapse, the patient becoming pulseless, pale, and cold. It is often preceded or accompanied by vaginal hemorrhage in greater or less quantity. The occurrence of these three—1, the usual signs of pregnancy for six or eight weeks; 2, the periodical pain, and 3, the vaginal hemorrhage—ought always to lead the physician to suspect extra-uterine pregnancy. If a deciduous membrane is discharged from the uterus, the diagnosis is certain.

After examining the histories of some two hundred and eighteen cases, he had found the condition was often associated with pelvic peritonitis and malformations about the uterus. In the course of this study he had been surprised to find a large number of cases in which the Fallopian tube entered the cavity of the uterus at some abnormal point, frequently near the cervix instead of the fundus.

In this case the ovum was lodged in the left Fallopian tube, which Dr. P. said was not the most common seat of a tubal pregnancy, it being much more frequent on the right side. The rupture had occurred here much earlier than it usually does, taking place in the majority of cases at the end of the second month. It not unfrequently happens that if it goes beyond this time it reaches nine months, and cases are recorded which have gone beyond full term, the autopsy revealing the fetus in the Fallopian tube. An undoubted decidua lines the uterus in this case, and this is always the case, though this fact is denied by Robert Lee. The decidua is formed and often thrown off, being mistaken for an abortion. Nor is it always thrown off in mass, but often in pieces so small that it can only be detected by careful microscopical examination of the vaginal discharges.

Dr. PARRY also said the second clot in the specimen presented by Dr. CATHCART was the result of a previous hemorrhage; that twin extra-uterine pregnancies were rare, there being but one on record in this country, in the *New York Medical Repository*, in 1810, and possibly one in France.

On the other hand, combined intra- and extra-uterine pregnancies are not so rare.

Dr. H. LENOX HODGE said there had fallen under his notice but one case of extra-uterine pregnancy. It was of the kind called interstitial. The patient was brought to him from the country. The possibility of a tumor being present had been raised on account of the peculiar shape of the body. He decided that it was a case of extra-uterine pregnancy advanced to seven or eight months. In consultation with his father it was determined to bring on labor and endeavor to save both mother and child. This was done by dilating the os uteri with Barnes's dilators. After the dilatation was accomplished, the tissues of the uterus on the side of the tumor were scratched with a blunt-pointed instrument, and finally gave way, and the membranes ruptured. A child was extracted, which lived about three hours, and the mother completely recovered. The seat of the tumor in that instance was on the right side, at the entrance of the Fallopian tube, but the whole uterine cavity was encroached upon by the presence of the child.

Dr. PARRY said that he had met with the record of a case similar to that reported by Dr. HODGE. The patient was delivered by passing the hand into the cavity of the uterus and rupturing the cyst. Dr. PARRY was not certain whether it was tubal or interstitial, and said that he had not met with the record of twenty cases of interstitial pregnancy,—he recalled but eleven out of two hundred and eighteen. Interstitial pregnancy is also more common on the left side than on the right. In a case reported by Braxton Hicks (*Trans. Obstet. Soc. Lond.*, 1868, p. 57), he said the cyst rup-

tured spontaneously into the cavity of the uterus during the sixth month. The placenta was not delivered, and the woman perished.

Dr. HODGE asked Dr. PARRY what he considered the essential difference between *interstitial* and *tubal* pregnancy. He had always considered that interstitial in which the product of conception, though still in the Fallopian tube, had been arrested in that portion passing through the uterine walls.

Dr. PARRY replied that there were a number of theories, some authors defining interstitial pregnancy as does Dr. HODGE, while others believe that the fetus is absolutely developed in the tissue of the uterus, the ovum having entered, when exceedingly small, a crypt which closed over it.

Dr. HORACE WILLIAMS inquired of Dr. HODGE the management of the placenta.

Dr. HODGE replied that it was extracted in the usual manner from the cyst in the walls of the uterus.

The PRESIDENT referred to a specimen of *right tubal pregnancy*, in which the ovum had attained the age of three or four weeks, presented to the Society by Dr. Harris in 1857.

The PRESIDENT also recalled a specimen which he had presented some years ago, in which, during menstruation, a follicle in the ovary had ruptured, and hemorrhage had occurred from the corpus luteum. Acute peritonitis supervened, and proved fatal in forty days.

Dr. TYSON also exhibited the *lungs* of a man who had died of *acute miliary tuberculosis* in his wards at the Philadelphia Hospital. He was 32 years of age, and had been employed in the gas-works of this city. His father died of typhus fever, and his brothers and sisters were in good health, but the cause of his mother's death is unknown. He had himself never been ill, except as to a slight cold last winter.

On admission, October 25, he said he had been sick four weeks. For the first two weeks he complained chiefly of malaise, and at the end of that time had a chill followed by fever, with diarrhœa and some cough, and with these latter symptoms he kept his bed.

When examined after admission, there was a circumscribed red flush on each cheek; his skin was moist; temperature 100° Fahr. There were slight tenderness in the right iliac region, slight diarrhœa, some sore throat, and bronchial cough with expectoration of mucus.

By percussion there was resonance throughout the chest anteriorly and posteriorly, with symmetrical expansion throughout. In auscultation no râles were heard; the respiratory murmur was not enfeebled, being somewhat louder than in health. The increased vocal fremitus and vocal resonance were, however, marked, but, being unaccompanied by any other signs of chest-trouble, this peculiarity was accepted as a physiological exaggeration in this individual.

By the 28th the diarrhœa had ceased, while the cough increased, with expectoration of a "currant-jelly"-like matter. His temperature on this day in the morning was 99° Fahr., in the evening 99½° Fahr.

On the 29th the morning temperature was 100¼° Fahr., with a pulse of 110; in the evening 103° Fahr., with a pulse of 120.

30th.—Temperature 101°, pulse 111; evening, temperature 101°, pulse 100.

31st.—Temperature 100½°, pulse 92; evening, temperature 100½°, pulse 88.

On November 1 he was weaker, and there was some disturbance of the nervous system, indicated by muttering delirium from which he could be roused, subsultus, jerking of the hands and feet, and dilatation of the pupils. The temperature in the morning was 100½°, in the evening 100½°.

On the 2d, morning temperature 101°, evening 100½°.

On the 3d, fine crepitus was heard throughout the right lung, and there was more of a bronchial element in the breathing, but the physical signs were otherwise unchanged.

By the 5th he was much weaker; crepitus was heard over both lungs, and resonance was slightly impaired below the scapulae, but there was no dulness.

On the 7th occurred a profuse sweat, with marked reduction of temperature, from 100° in the morning to 97° in the evening. This was repeated the next day, with the same difference in evening and morning temperature, and again on the 9th. The sweating was particularly profuse about the head, and twice on this day, on the evening of which he died, he uttered a sharp cry.

At the post-mortem examination both lungs were found studded with gray granulations about the size of a millet-seed, so closely strewn that not a square inch of lung-tissue escaped. The pleura and bronchi beneath the mucus-membrane were thickly studded with small shining granulations of miliary tubercle. The larynx was not examined. There was a small cavity an inch in diameter in the posterior apical portion of each lung. They were apparently empty, their walls were thickened and smooth, and they had evidently existed some time. The bronchial glands were enlarged, but not softened.

The heart was healthy, but the pericardium contained some small patches of old lymph.

The peritoneum and mesentery were normal, but there was considerable congestion of the lower part of the ileum and upper part of the colon: there was no ulceration. The liver and kidneys were fatty.

On exposing the brain there appeared considerable subarachnoid oedema over the cerebrum. Ten ounces of serum were found in the base of the brain and beneath the tentorium, but little in the ventricles. A deposit of miliary tubercle was found upon the upper surface of the cerebrum, the cerebellum, on the pons, and the choroid plexus was studded with tubercle.

Dr. HUTCHINSON referred to a case of acute miliary tuberculosis supervening upon chronic pleurisy, reported by him at length in the *Philadelphia Medical Times* for March 1, 1872. The most noticeable feature of the case was the want of correspondence between the physical signs and general symptoms. Thus, while the patient suffered from extreme dyspnoea, there was only slight dulness upon percussion over the back of the chest, and auscultation revealed nothing more than a diminished intensity of the respiratory sound, together with prolongation of the expiratory murmur, and occasional sibilant and sonorous râles. There was, however, cyanosis of the lips and of the ends of the fingers, showing interference with the circulation through the lungs. The temperature was elevated, but the evening rise was exceedingly slight. Taking this circumstance and the negative signs furnished by the case into consideration, he was able to make a correct diagnosis during the life of the patient.

The PRESIDENT said that in his experience the results of auscultation in these cases had been uncertain and irregular. He had not observed marked suppression of vesicular murmur; but more generally alteration of the murmur, the expiration being prolonged, and the inspiration at times rude, at others hissing, with, at a comparatively early period, the occurrence of diffuse, fine crackling.

DEVELOPMENT OF BACTERIA.—Dr. Oslez, of Canada, claims to have witnessed, under the microscope, the actual development of bacteria from small masses of agglutinated corpuscles. To observe this phenomenon, the blood is mixed with a weak solution (three-fourths per cent.) of common salt, and maintained at the temperature of the body.

GLEANINGS FROM OUR EXCHANGES.

SUICIDES IN FRANCE.—The Paris correspondent of the London *Lancet* extracts from the *Journal Officiel* the following figures: During the year 1871, 4490 acts of suicide were accomplished; 3596 by men, and 894 by females. Out of the above number of cases, 164 individuals had not attained their majority; 1125 were aged from twenty-one to forty; 1782 from forty to sixty; 1362 above sixty; whilst the age of fifty-seven among them was unknown. As to the married or single condition of 4324 of the individuals who had committed suicide, and concerning whom authentic information could be gathered, the following figures are given, and are of great interest: 1410 single people; 1443 married with children; 676 married without children; 484 widows and widowers with children; 311 widows or widowers without children. More than six-tenths (2699) inhabited rural communes with a population of not more than 2000 inhabitants, whilst 1723 inhabited towns. Another interesting item is the mention of the peculiar manner in which death was brought about. Thus, it appears that out of the total number of 4490 cases of suicide, in 1991 it was produced by strangulation; in 1278 by drowning or submersion; in 591 by gunshot wounds; in 215 by asphyxia with coals; in 152 by cutting instruments; in 143 by a wilful fall from heights; 70 by poison; 50 by various other means. As to the supposed motives which led to the committal of suicide, in only 4077 cases was the cause made out. In 1472 cases suicide is attributed to mental disease; in 950 to anguish or pain of various kinds (out of which 535 to physical pain); 651 to bad conduct (out of which 492 to drinking); 620 to family griefs; and 369 to misery. In fifteen cases suicide was committed by the authors of great crimes.

ICTERUS AFTER THE ADMINISTRATION OF HYDRATE OF CHLORAL (Dr. A. Wernich, *Deutsches Archiv für Klin. Med.*).—Reports of cases of icterus following the administration of chloral have already been published both by Dr. Wernich and by other observers; and to these he wishes to add those contained in the present article, in the hope that physicians using this drug may be induced to contribute their observations, and thus aid in the accumulation of sufficient data to afford an explanation of its influence in producing icterus.

Case I.—A woman, the wife of a laborer, æt. 37, had been suffering for a year from indigestion, and at times vomiting, and for twelve weeks from severe pain in the right hypochondrium. For five days previous to her admission into the hospital she had noticed a yellowish color of the skin and conjunctiva, and that her urine was of a dark color. In the epigastric and right hypochondriac regions there could be felt a tumor of firm consistence almost as large as a man's head, which by palpation and percussion was found to be sharply defined from the liver.

During the ensuing two weeks the icteroid hue of the skin was but slight, and the size of the tumor steadily but slowly increased. These symptoms were accompanied by paroxysmal attacks of pain, the severity of which constantly increased, which at first were to some extent relieved by large hypodermic injections of morphia. Later, however, morphia ceased to afford relief, and a trial of chloral was made. The patient passed a quiet night, but in the morning was found in a state of stupor, and the surface of the entire body was of an olive-green color. This continued for two days, accompanied by a mild delirium until the death of the patient, ten days later.

Case II.—A woman, æt. 34, had suffered for three years from want of appetite, vomiting, and a slight de-

gree of jaundice. Paroxysmal attacks of pain came on, the intensity of which steadily increased, and, as morphia failed to give relief, chloral was given, with results similar to those of the first case. The following morning the skin was found deeply jaundiced, the patient was sleepy, and there was some mental disturbance. Death followed the next day.

Case III.—A woman, æt. 40, had mitral insufficiency of high grade, and suffered from results consequent upon that affection. To relieve her from the sufferings due to hydrothorax, after the failure of diuretics resort was had to paracentesis, which afforded temporary relief. The sufferings of the patient during the night being very great, morphia was administered, but with no good effect. Chloral was given and sleep produced. On the following morning the entire body was of an olive-green color, and the patient complained of unpleasant sensations about the head. The jaundice continued until the death of the patient, which occurred about two weeks later. The urine in this case was scanty, and contained albumen, but no biliary coloring-matters. The dose of chloral given in each of these three cases was three grammes.

Dr. Wernich considers that all the suggestions that have been made in explanation of this result of the administration of chloral are unsatisfactory. He concludes also that as yet no rule can be laid down to govern the exhibition of chloral in cases in which hepatic disease exists, for although in the cases narrated the administration of chloral seemed to promote the appearance of the icterus, yet it is often given without injury to those having affection of the liver, either active or latent.

MISCELLANY.

JACOB'S food for children is prepared as follows: Crack a teaspoonful of barley in a common coffee-mill, then boil it fifteen minutes in a gill of water, adding a pinch of salt. Then strain, and for a young child add one-half as much cow's milk as you have barley-water, and, whilst tepid, nurse from a nursing-bottle. Sweeten lightly with sugar. If the bowels are costive, use oatmeal in place of barley. Keep the bottle clean.

HORSE-MEAT appears to have acquired permanent footing in the popular Austrian bill of fare. According to the *Neue Freie Presse*, the slaughter of horses for food in July last amounted to 203, in August to 184, and in September to 221. In the entire quarter no less than 608 horses were converted into food. The price is not exorbitant. The "fore-quarters" sell at from twelve to fourteen kreutzers per pound, the hind-quarters at from fourteen to sixteen, the ribs and loins from sixteen to eighteen. Fat sells at from eighteen to twenty-six florins the hundred-weight, and bones at one florin and thirty kreutzers.

FATAL POISONING BY COLCHICUM.—Seven persons have died, and five others remain in a precarious condition, in Montreal, poisoned by colchicum. It appears that a man named Flaherty, seeing a sleigh standing on the street without a driver, stole a bottle of what he supposed to be sherry therefrom, but which proved to be wine of colchicum. This he shared with the inmates of the tenement in which he lived, and some neighbors, with the fatal results mentioned.—*The Canadian Medical Journal*.

NOTES AND QUERIES.

BLUE PUS.

CAN some of the readers of the *Times* give me some particulars on the subject of blue pus? A patient of mine with laryngeal chondritis discharged an abscess recently by cough, and among the bloody débris, but distinctly apart from it, were some two or three drachms of thin greenish-blue pus. Dr. Bertolet made a microscopic examination of this pus, and kindly wrote me as follows:

"The blue pus contained blood and pus-corpuscles, epithelial scales, and shreds of yellow elastic tissue. No vibriones or fungi are contained in this sputum. Although having a remarkable blue color *en masse*, this was not perceptible under the microscope. By this time the sputum itself has assumed a dark brownish-red color. . . . You will find this subject very well worked up by Lücke in *Archiv f. Klin. Chir.*, Bd. iii. p. 135; also by Zaufal, in *Archiv f. Ohrenheilk.*, vol. vi. pp. 206-219, upon 'Blue Pus in Otorrhoea.' The former attributes the blue color to the presence of vibrios, the latter to bacterium termo. Neither were present in this specimen, so that it is at least plausible to suppose that the blue coloration is due to the putrefactive changes acting upon the hæmatin or sulphate of iron."

Dr. Gibb, of London, presented a communication to the British Medical Association, at their late meeting, entitled "Cyanopuon Laryngis," but, from my recollection of the perusal of the published abstract of that paper, I cannot draw any satisfactory conclusion as to the appearance of this pus in my own case.

The one discharge of this peculiar pus has been the only one, though the patient has been expectorating ordinary purulent matter for a month since.

The presence of the blood-corpuscles detected by Dr. Bertolet may be accounted for by the pus having been in the basin in contact with a little blood, expectorated when the abscess ruptured. I am unable to determine the location of the abscess, but am inclined to believe that it is connected with the cricoid cartilage.

Any information on this subject, communicated personally or through the medium of the *Times*, will be greatly appreciated.

J. SOLIS COHEN.

THE next conversational meeting of the Philadelphia County Medical Society will be held at the Hall of the College of Physicians, Wednesday, December 24, 1873, at eight o'clock P.M.

The subject for the evening will be "Tracheotomy in Pseudo-membranous Croup," and the narration of a successful case. To be opened with remarks by Dr. M. O'Hara.

All regular practitioners of medicine in the city are cordially invited to attend.

At a conversational meeting of the Philadelphia County Medical Society, held December 10, 1873, Dr. J. G. Stetler presented the following resolutions, which were unanimously adopted:

"Whereas, It has pleased Providence to remove from our midst Dr. William Mayburry whilst still in the vigor of life and usefulness: therefore, be it

"Resolved, That the Philadelphia County Medical Society has heard with unfeigned regret of the demise of our late fellow-member and one of its honored ex-presidents.

"Resolved, That in the death of Dr. Mayburry this Society, as well as the profession at large, has lost an active and valuable co-worker: one who has always stood up for the elevation, rights, dignity, and ethical honor of the profession.

"Resolved, That we hereby tender our sympathy and condolence to the bereaved and afflicted family for this severe dispensation of Providence.

"Resolved, That a copy of the preceding preamble and resolutions be transmitted to the family of the deceased."

OFFICIAL LIST

OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U.S. ARMY, FROM DECEMBER 16, 1873, TO DECEMBER 22, 1873, INCLUSIVE.

BAILY, E. J., SURGEON.—Granted leave of absence for three months. S. O. 249, A. G. O., December 18, 1873.

CALDWELL, D. G., ASSISTANT-SURGEON.—Assigned to duty at Fort Griffin, Texas. S. O. 222, Department of Texas, December 6, 1873.

CAMPBELL, A. B., ASSISTANT-SURGEON.—To report in person to the Commanding General, Department of Texas, for assignment to duty. S. O. 247, A. G. O., December 13, 1873.

STYER, CHARLES, ASSISTANT-SURGEON.—Leave of absence extended twenty days. S. O. 67, Division of the South, December 16, 1873.

SATURDAY, JANUARY 3, 1874.

ORIGINAL COMMUNICATIONS.

ON WHAT WAS FOUND IN THE ALIMENTARY CANAL OF LUCIOPERCA.

BY HENRY C. CHAPMAN, M.D.

TO the naturalist no family of animals is more interesting than the entozoa, while to the physician some knowledge at least of this subject is of practical importance. The physiologist observes in these animals nutrition carried on without a stomach or intestines, which were so long regarded as absolutely necessary to the maintenance of animal life; while the embryologist sees in the generative organs a true hermaphroditic structure, and has constantly the opportunity of readily following the development of an animal from the state of the egg to that of the adult. By such investigations the ravages of trichiniasis have been checked, and the possibility of eradicating diseases like *stagers* and hydatids has been demonstrated. Naturally, therefore, when the opportunity presents, the viscera should be carefully examined for entozoa, so called in contradistinction to the epizoa, or those parasites which live externally. Sometimes little or nothing new is discovered; occasionally a new species appears; while nearly always some object of interest rewards the labor bestowed. Thanks to Mr. Francis Wistar, of Duncannon, Pa., I had the opportunity of dissecting the so called pike perch, or *Lucioperca*, a member of the Percoid family of fishes, often erroneously known as the Susquehanna salmon. Opening the stomach, intestine, and cæcal appendages, I found them filled with worms. I transmitted the viscera containing the worms to Dr. Leidy, who kindly determined for me the genera and called my attention to many interesting points in their economy. Before noticing the worms, it seems proper to mention here that Dr. Leidy discovered also in the stomach of the fish the valve of a *Lingula*, a marine shell-fish never found north of North Carolina: this is a very interesting fact, and important in reference to the habits of the fish, which has always been supposed to be confined to fresh waters, and not migratory. The only explanation, however, of the finding of the shell in the stomach, is that the fish swallowed it near the North Carolina coast and then went northward. The worms infesting the viscera of animals are either flat or round, called by helminthologists Plathelminthes and Nematelminthes; the tape-worm or *Tænia* will serve to represent the first order, the *Trichina* the second. Every one is more or less familiar with the general form of the *Tænia solium*, or tape-worm of man,—a long worm exhibiting an expanded head, with four suckers and a circlet of hooks, a slender neck composed of narrow segments or joints, a body in which the joints are broad and much flattened, the posterior ones containing the generative apparatus; each segment contains a male and a female organ, which are self-impregnating, an instance of true

hermaphroditism. At the margins of the joints may be seen the apertures through which the penis protrudes or the eggs escape. The position of these apertures is important as a means of determining the genus: thus, in the *Bothriocephalus* or *Tænia lata* the apertures are in the middle of the broad surface of the segments. The tape-worms in our *Lucioperca* belong to this genus, and are probably a new species. The tape-worm nourishes itself by simply imbibing the juices in the alimentary canal of the animal in which it lives. For a long time the origin of the tape-worm was involved in great obscurity; the cause of this was due, no doubt, to the fact of the tape-worm passing its embryo phase in one animal, its adult stage in another. Indeed, these different stages of existence were formerly supposed to be distinct animals, and described as such. Thus, the *Tænia solium* of man is found in its embryo condition in the muscles of the pig; at this stage of its existence it is known as the *Cysticercus cellulosus*, and its presence gives rise to measly pork. Should some of this measly pork be eaten raw or partially-cooked by a human being, the embryo *Tænia* or *Cysticercus*, finding in the intestine proper nourishment, develops, joint after joint is added, until finally the *Cysticercus* becomes a *Tænia*. In the segments most remote from the head, as before stated, are seen the generative organs, in which are found the eggs. These joints are passed off from time to time with the fæces, which are eaten by pigs; in the stomach of these animals the eggs develop into minute spined embryos; these migrate from the stomach and reach the various tissues, where they are transformed into *Cysticerci*. The *Tænia mediocanellata*, which differs from the *Tænia solium* in not having the circlet of hooks in the head, as well as in other characters, is derived from raw beef, which often contains the *Cysticercus* of that tape-worm. The disease in sheep known as *stagers* is due to the presence in the brain of the *Cœnurus cerebri*; the *Cœnurus* becomes in the intestines of the dog a tape-worm. The hydatids known as *Echinococci* are also only undeveloped tape-worms. The *Cysticercus* of the rat in the alimentary canal of the cat becomes a *Tænia*. As yet the *Cysticercus* of the tape-worm of our *Lucioperca* is unknown. These names—*Cysticercus*, *Cœnurus*, *Echinococcus*—ought to be discarded, since they only confuse, giving the idea that these organisms are distinct animals, whereas they are only the young of different *Tæniæ*. In reference to this matter there is an interesting fact in the literature of helminthology, not generally known, and not alluded to by Cobbold, which makes part of the true history of the development of the *Trichina*. In 1836 Professor Owen described the *Trichina spiralis* in man; in 1846 Dr. Leidy gave an account of the *Trichina spiralis* he found in the pig. Professor Leuckart,* as he acknowledges in his work, availed himself of Dr. Leidy's discovery by

* Untersuchungen über *Trichina Spiralis*, 1860, p. 18. "Eingedenk der Angaben Leidy's nach denen *Trichina Spiralis* gelegentlich auch in den Muskeln des Schweines gefunden werden konnte Ich in der Wahl des Versuchthieres kaum zweifelhaft sein."

using the pig in his investigations on Trichiniasis in 1860, and demonstrated that the Trichina of the pig when taken into the intestines of man laid eggs which developed embryos, and that these migrated into the tissues of the individual who had eaten the raw pork,—a common custom in Germany. Two genera of round worms, of which the Trichina is an example, were found in the alimentary canal of our pike perch. One of these was an Echinorhynchus, —the bristly-snout worm, so called from the snout being provided with bristles. The other genus was a Nematoid, as yet not investigated. The Ascaris, or thread-worm of the human body, is a familiar example of a Nematoid.

Man usually assumes that the world was made for him, forgetting that when the axe of civilization is heard there die out the most beautiful birds, brilliant insects, lovely flowers, and other bright forms that enchant the eye of the wanderer among tropical forests. If the nervous system of the tape-worm and Trichina were as much developed as that of man, and they reasoned after his manner, they would at once conclude that many animals were made for them; for are not the rabbit and dog the homes of the *Tænia serrata*, the rat and the cat necessary to the existence of the *Tænia crassicolis*, while the pig and man—the lord of creation—are only the dwelling-places of Trichina, *Tænia*, and other worms?

A CASE OF IMPREGNATION WITHOUT INTROMISSION.

BY THOMAS HAY, M.D.,
Philadelphia.

THE following case is interesting as illustrating the fact that impregnation can take place without intromission. It shows, too, that a persistent hymen is no evidence in a case of rape.

In this case the semen was expended on the external parts, and the spermatozoa, by their peculiar motions, through affinity or attraction, found their way into the uterus, and came in contact with, and fecundated, the ovum.

I was visited by Mr. and Mrs. G., from New Jersey, in consequence of enlargement of the lady's abdomen. A belief was induced that a tumor from disease had made its appearance, and that it was growing inside.

This belief was strengthened and almost confirmed by the fact that the existence of pregnancy was not thought possible, and such opinion was not entertained in her case. She had been married more than four months, there *never was intromission*, and the *courses appeared regularly as usual*.

The husband was aware of the presence of an unyielding obstacle, and the severe pain at coition made penetration impossible. Modesty and other reasons caused delay in seeking medical advice till the already enlarged abdomen was increased in size, and the pain during intercourse had become so great that it was no longer attempted.

Examination showed a strong, unyielding hymen, attached all round the vagina *near its entrance*, hav-

ing a hole above the middle large enough only to admit the tip of the little finger; a vascular tumor of the urethra, and extensive erythema of the vulva; the parts were irritable, and the touch of the finger caused the patient to cry out from pain.

I made a crucial incision into the hymen, cut off the four angular flaps, excised the vascular tumor, and applied caustic.

The opening made was maintained by cylinders of lint. The pelvic cavity was normal, and the parts soon healed.

The lady had been three months pregnant, and, as the signs of pregnancy increased, she, as well as the husband, became better satisfied with my diagnosis; and when, after about six months, she was delivered of a healthy, well-developed boy, both were convinced of its correctness, and, as indulgence in the connubial privilege was no longer a cause of pain, they were quite happy.

MEMORANDA OF THE EFFECTS OF CARBOLIC ACID IN A LARGE DOSE.

BY S. J. RADCLIFFE, M.D.,
Washington, D.C.

GENERAL H., a retired officer of the army, had been suffering from an attack of chronic articular rheumatism. On the 27th of November I prescribed for him an effervescing saline draught, consisting of eight ounces of a carbonated solution, and an acid solution containing one ounce of citric acid and eight ounces of water,—half an ounce of each to be taken while effervescing.

I visited him on the morning of the 28th, and found him sitting on the bed, a vessel at the bedside one-third filled with matter, probably about a pint, seemingly from the stomach, mixed with blood. On inquiring what was the matter, he replied he had been vomiting, and his nose had been bleeding. He said he had taken, a little while before my visit, the first dose of the medicine prescribed, and it did not effervesce as I had said it would, but made him very sick, and he threw it up with the contents of his stomach, and his nose bled quite freely immediately after. On tasting the mixture in the vial containing the acid solution, I at once recognized the flavor, and informed the general that he had taken a pretty good dose of carbolic acid, the odor of which he then for the first time remembered. I took the vial containing the acid solution to the drug-store, and the drug clerk admitted confusedly, after seeing the prescription again, that he had made the mistake and put an ounce of fluid carbolic acid in eight ounces of water, instead of an ounce of citric acid. There was about half a drachm of the acid in each dose, the quantity the patient took. Fortunately for him, he took it on a full stomach, after breakfast, or it would doubtless have produced disastrous results. As it was, he experienced no other effects than nausea, epistaxis, some drowsiness, and a bad taste in the mouth during the day.

REPORT ON THIRTY CASES OF CHOREA.

BY GEORGE S. GERIARD, M.D.,

Assistant Physician to the Orthopedic Hospital and Infirmary for Nervous Diseases.

THE majority of the following cases of chorea were obtained from the records of the department for nervous diseases connected with the Ortho-

pedic Hospital; for the data of the remainder I am indebted to Dr. Mitchell, who very kindly placed his private case-books at my disposal.

So far as I have been able to discover, this is the first collection of cases of chorea that has been made in this country.

I have arranged the cases in a tabular form, in order to facilitate analysis.

NO.	SEX.	AGE.	SIDE AFFECTED.	DURATION OF COMPLAINT BEFORE TREATMENT.	APPARENT EXCITING CAUSE.	MODE OF ONSET AND SEASON OF YEAR.	PREVIOUS ATTACKS.	PECULIARITY OF SYMPTOMS.	TREATMENT.	RESULT.	ADDITIONAL REMARKS.
1	M.	8	Right.	From infancy.	Followed infantile convulsions.	Sudden.	.....	Partial right hemiplegia, and carpo-pedal spasm.	Arsenic; division of tendo-achillis and plantar fascia-apparatus.	Marked improvement.	
2	F.	16	Entire body.	Fifteen years off and on.	Fright.	Gradual.	.....	.....	Galvanism; arsenic.	Marked improvement.	Twenty-drop doses of Fowler's solution taken without toxic effects.
3	F.	9	Entire body.	Three weeks	Fright.	Gradual; summer.	.....	Patient exceedingly irritable.	Arsenic; zinc.	Cure.	
4	M.	17	Right.	Three m'ths	None discovered.	Gradual.	.....	Loss of power in right arm and leg; attacks of "petit mal."	Bromide and iodide of potassium.	Unknown.	
5	M.	16	Entire body.	Ten years.	No assignable cause.	Gradual.	.....	Loss of power in some of the facial muscles.	Galvanism; zinc.	Cure.	
6	M.	7	Entire body.	Six weeks.	None discovered.	Gradual.	One previous attack.	Movements very violent.	Arsenic; cold douche; chloral occasionally at night.	Cure.	
7	F.	8	Both arms, head, and neck.	Four months	Rheumatism	Gradual.	A slight previous attack.	Harsh systolic apex murmur; loss of power in left arm and leg.	Arsenic; cold douche.	Marked improvement.	
8	F.	4	Both sides, but right chiefly.	Three m'ths	None discovered.	Spring.	.....	Loud noise during respiratory movements.	Cimicifuga; arsenic.	Marked improvement.	
9	M.	12	Head and shoulders, and occasionally the face.	Five months	No assignable cause.	Both attacks occurred in the spring.	One previous attack.	Patient exceedingly irritable.	Arsenic.	Cure.	
10	F.	16	Right.	Six years.	Fright.	Autumn.	.....	Systolic apex murmur.	Arsenic.	Not known.	
11	F.	22	Right.	Nine years off and on.	Fright.	.....	.....	.....	Bromide of potassium; arsenic; iron.	Cure.	
12	F.	17	Both sides, but chiefly the right.	Two weeks.	Violent and long-continued tooth-ache.	Winter.	.....	.....	Arsenic; cold douche.	Cure.	Patient's mother had chorea early in life.
13	F.	9	Right.	Eight weeks.	Fright.	Gradual, and preceded by pain in arm.	.....	Slight loss of power in right leg.	Zinc; arsenic; cold douche.	Great improvement.	
14	F.	15	Right.	Ten months.	Fright.	Sudden; spring.	.....	Loss of power in right arm and leg.	Zinc; douche.	Cure.	
15	F.	7	Entire body.	Four weeks.	Violent abdominal pain	Spring.	.....	.....	Arsenic; purgatives.	Cure.	
16	M.	8	Left.	Three weeks	Rheumatism	All of the attacks occurred in the spring.	Two previous attacks.	Murmur of mitral regurgitation.	Arsenic; iron.	Cure.	
17	M.	14	Head and right arm.	Two weeks.	Fright.	Spring.	One previous attack.	.....	Zinc.	Marked improvement.	
18	F.	16	Left.	Two months	Suppression mensium.	Spring.	.....	.....	Arsenic.	Cure.	
19	M.	8	Right.	Three years off and on.	Rheumatism	Winter.	Loss of power in legs.	Murmur of mitral regurgitation.	Syr. ferri iod.; ol. morrhue.	Improvement.	
20	F.	17	Left.	One month.	Rheumatism	Sudden; spring.	.....	Soft basic systolic murmur.	Arsenic; chloral.	Improvement.	
21	F.	16	Entire body, but chiefly right side.	Three years off and on.	None discovered.	.....	.....	.....	Iron; arsenic.	Left off attendance.	Neurotic family history.
22	F.	9	Entire body, but chiefly left side.	Eight m'ths.	None discovered.	Spring.	.....	.....	Sulphate of zinc.	Not stated.	
23	F.	14	Left.	Two months	Uterine irritation.	.....	.....	Some loss of power in left side.	Arsenic; atropia.	Marked improvement.	

NO.	SEX.	AGE.	SIDE AFFECTED.	DURATION OF COMPLAINT BEFORE TREATMENT.	APPARENT EXCITING CAUSE.	MODE OF ONSET AND SEASON OF YEAR.	PREVIOUS ATTACKS.	PECULIARITY OF SYMPTOMS.	TREATMENT.	RESULT.	ADDITIONAL REMARKS.
24	F.	14	Left.	Ten days.	Mental worry.	.....	.....	.....	Sulphate of zinc; douche; arsenic.	Cure.	One sister had chorea.
25	F.	11	Right.	One year.	Hard study and mental worry.	Summer.	.....	Loss of power in right arm and leg.	Arsenic.	Improvement.	Neurotic family history.
26	F.	13	Right.	Six weeks.	Blow upon hand.	Summer.	.....	.....	Sulphate of zinc.	Cure.	One sister attends hospital for epilepsy.
27	F.	4	Entire body, but chiefly the left.	Two weeks.	No assignable cause.	Gradual; spring.	.....	Movements very violent; loss of power in right side.	Arsenic; douche; cimbicifuga.	Cure.	
28	F.	10	Entire body.	.....	No assignable cause.	All attacks occurred in the spring.	Three previous attacks.	Child became very pert.	Arsenic.	Cure.	
29	M.	18	Right.	.....	No assignable cause.	Both attacks occurred in the spring.	One previous attack.	.....	Gymnastics.	Cure.	
30	M.	7	Entire body.	One month.	Mental distress.	Summer.	.....	Curious forward and backward movement.	Zinc; arsenic; douche.	Cure.	

In reviewing the preceding table, we find in regard to the age and sex of the patients that there were—

Under 10 years of age 12 cases: 5 males 7 females.
 From 10 to 21 " 18 " 5 " 13 "

Total 30 cases: 10 males 20 females.

This table agrees with the common observation that chorea is essentially a disease of early life, and that females are more prone to the disease than males.

In the second period of the summary the number of females is more than twice as great as the number of males,—a disproportion which may be accounted for by the fact that the period mentioned embraces the age of puberty, when the female is especially liable to disturbances of a nervous kind.

In fifteen cases the affection was entirely unilateral, the irregular movements being confined in ten instances to the right side, and in five to the left. In seven cases the choreic movements were stated to have been general; in three to have been general, but particularly marked upon the right side; and in two cases to have been general, but chiefly pronounced upon the left side. In the remaining two cases the movements were confined to certain groups of muscles.

According to M. Sée, the irregular movements of chorea ordinarily predominate on the left side. Dr. James Russell, on the contrary (*A Contribution to the Clinical History of Choreia, Medical Times and Gazette*, 1868 and 1869), found in twenty-nine cases in which the disease was unilateral that the irregular movements were confined in eleven instances to the left side, and to the right in eighteen. Dr. Hughlings Jackson states that the side (as in hemiplegia from embolism) usually affected is the right.

Dr. Russell states that many cases of chorea commencing unilaterally ultimately become bilateral. As an illustration of this point, the following case may be related:

Jane McC., æt. 4, was seen for the first time on the 25th of May, 1873, about one week after her mother had first observed twitchings of the muscles of the left side of the face and of the left arm. The irregular movements had gradually become more violent, and had extended to the left leg, but not to the right side of the body. The patient was ordered to have cold affusions to the spine night and morning, and to take arsenic in increasing doses. On the 28th the movements had extended to the right side, and were almost as violent as upon the side first affected. The child finally recovered, but her convalescence was prolonged by partial left hemiplegia.

In regard to the alleged cause of the disease, it will be seen from the table that it was ascribed to fright in seven cases; to rheumatism in four; to violent pain in three; to mental worry in three; to uterine irritation in two; to infantile convulsions in one: total, twenty. In the ten remaining cases no cause was discovered.

This table shows, what is in accordance with clinical experience, that fright and rheumatism are frequent causes of chorea. Cardiac murmurs were found in the four cases in which rheumatism was presumed to have been the exciting cause of the complaint. Dr. Kirkes maintained that when a connection between rheumatism and chorea is found to exist there has been an inflammation of the valves of the heart, and that the association is not between chorea and rheumatism, but between chorea and valvular disease of the heart.

Of the many theories that have been advanced by writers on chorea to account for the connection of the disease with a cardiac lesion, there remains but one—the theory of embolism—which has not been abandoned as untenable.

In the majority of the cases in which fright was the assigned cause of the disease, there was an interval of some days or even weeks between the exposure to the cause and the development of symptoms. In a few instances, however, there was an immediate outbreak of choreic movements. In Case 10, a girl ten years of age, irregular movements began almost

immediately after the patient had been frightened by having a dead cat flung at her.

In two of the cases in which no exciting cause could be found there existed a distinctly neurotic family history. In three cases, all females, aged seven, eleven, and fourteen, respectively, the choreic movements followed prolonged mental efforts on the part of the patients to take a good standing in their classes at the July examinations. I have recently heard of three other cases in which chorea was developed under similar circumstances.

Dr. Mitchell has observed that chorea occurs more frequently, and in a more severe form, in the spring than at any other season of the year. He has also found that the attacks of epileptics, besides being of more frequent occurrence in the spring, are much more difficult to control than at other seasons.

A glance at the table will show that the attacks occurred in the spring in thirteen cases; summer, four; autumn, one; winter, two: total, twenty.

In the ten remaining cases the point is not mentioned. It is difficult to offer any explanation for this remarkable preference of chorea for the spring months, unless it is due to the enervating weather of the season in question. Of seven cases in which previous attacks had occurred, five had had one previous attack, one had had two, and in the seventh case the patient had suffered from three. All but one of these previous attacks had occurred in the spring; and the tendency that chorea has to recur at this season is thus very well shown.

The presence of partial paralysis of some kind was noted in nine cases. Out of this number five had right hemiplegia, two had left hemiplegia, and of the remaining two cases there was loss of power in some of the facial muscles in one instance, and in one leg in the other. The frequent occurrence of unilateral chorea, and of "choreic hemiplegia," unquestionably gives much support to the theories advanced by Drs. Hughlings Jackson and Broadbent in regard to the seat of the lesion of the disease. Dr. Jackson (*Edinburgh Medical Journal*, 1868) has gone so far as to localize the seat of the lesion in the "convolutions near the corpus striatum."

Dr. Broadbent (*British Medical Journal*, 1869) is of the opinion that the lesion is situated in the sensori-motor ganglia; and he thinks that the phrase "delirium of the sensori-motor ganglia" is more applicable to the disease than "insanity of the muscles." In regard to the nature of the lesion, Dr. Jackson is disposed to believe exclusively in embolic obstruction of the smaller branches of the middle meningeal artery. In answer to the often-urged argument against embolism being the cause of chorea, that anæmia from plugging of vessels can scarcely lead to increased expenditure of force, Dr. Jackson quotes the conclusion arrived at by MM. Cotard and Prévost, that "obstruction of arteries is ordinarily followed by hyperæmia," etc.

Dr. Broadbent holds that the symptoms characteristic of chorea arise not from any peculiarity of the morbid change, but out of the function of the particular centres affected.

Both of these writers agree in laying much stress

upon impairment of nutrition causing "instability" of the part affected, as opposed to destruction of function. The presence of anæsthesia or of disturbance of the special senses was not noted in any of the cases contained in the table, and it may be stated in this connection that Dr. Mitchell examined the eye-ground in a number of instances, but the results were always of a negative character.

It will be seen from the table that the main treatment of the disease in the majority of cases consisted in the administration of arsenic. This metal was generally exhibited in the form of Fowler's solution, and the doses, small at first, were gradually increased until slight toxic effects were produced. On the occurrence of constitutional symptoms the patients were directed to gradually reduce the doses of the medicine, and then to increase them again. In the more obstinate cases arsenic was pushed to its full toxic effect. Zinc in the form of sulphate was employed in a number of cases, and with a result almost as good as that following the use of arsenic. The mode of its administration was much the same as that adopted in the case of arsenic: that is, in doses gradually increased. In the majority of instances, in addition to the medicinal treatment, the patients were directed to have cold affusions to the nape of the neck and to the spine. The cold douche has been found to be a valuable adjunct to the treatment.

The constant current was employed in a few cases, but its application was not attended by any markedly good results. We think that its power to relieve choreic movements has been greatly overrated. In several cases there was a cessation of the movements while the current was passing.

In reviewing the table, we find that the result of treatment was—

Cures	16 cases.
Marked improvement	7 "
Result not known	4 "
Improvement	3 "
Total	30 "

It is highly probable that a number of the cases in which the notes "improvement," "result not known," and "marked improvement," were made, were ultimately cured, but neglected to return to make a final report.

A CASE OF SPINA BIFIDA CURED BY ASPIRATION AND INJECTION OF IODINE.

BY CHARLES M. ELLIS, M.D.

ON the 9th of May ult., I saw, in consultation with my friend Dr. R. C. Carter, a little girl, two years old, with a congenital tumor over the lumbosacral region of the spine. When first observed shortly after the child's birth, it was no larger than a hickory-nut, but had now attained a longitudinal diameter of three inches, the lateral diameter being rather less: it projected above the surface about one and a half inches. It was decidedly fluctuating, and pressure produced marked uneasiness and flushing of the face. In the erect posture the tumor was

tense and more resisting, but became soft and fluctuating when the child was laid on its face. It was a case of spina bifida.

The skin-covering was perfect, and the case was uncomplicated by hydrocephalus or other bodily deformity. The nutrition of the lower limbs was unimpaired. The child's health being in all respects excellent, I regarded it as a most favorable case for surgical interference. Using my hypodermic syringe as an aspirator, I evacuated the sac, drawing off more than six ounces of spinal fluid, and applied firm pressure over the sac by means of a double spica. This was done tentatively with the view of impeding its growth, which had recently been very rapid, until I could return at a future day prepared to attempt its radical cure. In a short time the sac refilled.

On the 3d of June I again saw the child. The tumor was a trifle larger than a month before. I again drew off the fluid by means of the hypodermic syringe, and, closing the orifice in the bony canal by my finger, I injected about three drachms of a solution of iodine and iodide of potassium: five grains of the former, and fifteen grains of the iodide, to an ounce of alcohol. Much to my annoyance, I was unable to aspirate the iodized fluid, and after a few minutes of unsuccessful efforts I threw into the sac a fluidounce of the spinal liquor, which had been kept at 100° Fahr. I now plugged the opening by a compress firmly held in place by a double spica. I have little faith, however, that I prevented the fluid entering the canal. For two or three days the child was very restless, had a high temperature,—106° Fahr.,—and frequent pulse, 140. No special symptoms of spinal irritation were developed. These unfavorable symptoms gradually subsided, and the child soon regained its accustomed health, and the tumor regained its former dimensions; but it was less elastic and less translucent, and gave to the touch a doughy feeling. The spica was replaced by an elastic pelvic bandage, which has since kept up constant pressure. Six weeks later, the tumor was notably smaller and harder, and at the date of this writing Dr. Carter informs me that the cure is perfect, the only remaining evidence of the tumor consisting in a thickening of the integuments.

With a properly constructed aspirator (Dieulafoy's), the retention of the iodized fluid would not have occurred, and the operation would have been at once executed with speed, safety, and success.

ELKTON, MD., November, 1873.

TINEA SYCOSIS.

BY JULIO J. LAMADRID, M.D.

AFTER reading the two interesting cases of tinea sycosis in a late issue of your journal, reported by Dr. George G. Wood, there recurred to my mind two similar cases which came under my observation during this year; and, as my treatment was different, and with as good success as that mentioned in Prof. Niemeyer's Practice and now recommended by Dr. Wood, I thought it a good

opportunity to have my two cases reported through the columns of your journal, for other physicians to give it a trial, as it is the easiest way to cure such cases.

Case I.—L. M., a mechanic, aged 35 years, of sound constitution, came to my office last May with an eruption of small acuminated pustules upon the chin and lower lip, which on close examination I found to be what is called the "barber's itch," contracted, five weeks previously to my seeing him, in a barber-shop. As there seemed to be a great deal of inflammation, I advised the application of poultices, and told him to call again in two days. I then had his beard removed with a pair of scissors,—not with the razor, as advised by Dr. Wood, for fear it would increase the irritation,—and prescribed for him the following:

R Acid. carb. cryst., gr. xxx;
Glycerinæ, f3i. M.

Sig.—To be applied twice a day, after the affected part has been thoroughly washed with tepid water and Castile soap. He called again in a week, completely cured, and remarked that in the future he would provide himself with a razor, etc.

Case II.—T. B., a clerk, aged 18 years, came to me last September, with the same complaint as Case I., with the exception of the disease being of less duration and severity, and accordingly I prescribed the acid in less quantity, and to be used as in the former case. In less than a week he was free from the disease.

BROOKLYN, L. I.

NOTES OF HOSPITAL PRACTICE.

PENNSYLVANIA HOSPITAL.

CLINICAL SERVICE OF PROF. DA COSTA.

Reported by R. S. KEELOR.

RHEUMATOID ARTHRITIS.

THE affection which we are about to consider has been known by various names, such as rheumatic gout, rheumatoid arthritis, etc., which latter has been generally adopted as a sort of compromise between the two prevailing and contending theories as to its nature,—rheumatic or gouty. It affects persons of an anæmic or scrofulous constitution, and is usually traceable to exposure to cold or damp. It begins with slight swelling of the smaller joints, as a rule, with tenderness, but no discoloration. The swelling is due to an inflammation, with effusion of water or pus, which finally subsides, and the swelling disappears. This is now followed by a thickening of the synovial membranes, and the formation of "vegetations," which gradually harden, and stiffness of the joint supervenes.

Second attacks are apt to follow upon partial convalescence, leading to complete disorganization of the joints affected; finally we find loss of articular cartilage, the bones, becoming eburnated, produce the peculiar grating sound noticed when the joints are moved. Dislocation is a frequent sequence.

The constitutional involvement is peculiar, and, as we become more familiar with the disease, affords a valuable aid in its diagnosis. It is usually subacute, and presents no fever-phenomena, no uric acid or increase of fibrin in the blood, and no acid perspiration; neither are there deposits in the finger-joints and ears, as in gout. There is no history of hereditary rheumatism or gout. The absence of cardiac symptoms is peculiar. These lesions are so intimately associated with rheumatism as to warrant the assertion that four-fifths of the cardiac diseases are attributable to

rheumatism. These points in the diagnosis and clinical history are proofs of its being a *distinct disease*.

Appended is the clinical history of two cases in point:

Case I.—A man, aged 30 years, a shoemaker by trade, first became affected, two years since, with swelling, pain, and stiffness in the great toe of the left foot, which have extended to all of the larger joints. He gave, upon admission, a history of previous good health; never had fever during the progress of his disease; never had syphilis; and there is no family history of gout or rheumatism. It came on gradually. His urine is normal, bowels regular, and he has a good appetite. He has lost flesh, but is now gaining again. The hands present the peculiar distorted appearance of the disease, and there is "grating" upon motion; the large joints are alike affected, being rigid and painful upon motion. Auscultation reveals, at the base of the heart, a soft systolic murmur, which is not constant; there is no hypertrophy. He has been taking citrate of lithia and cod-liver oil; this, conjoined with baths and regulated diet, has produced favorable results.

Case II.—A French sailor, who has been in the house five days, states that he has been affected two months, giving no acute history; there is some stiffness of the smaller joints, entire absence of heart-lesions, no fever, tongue somewhat coated, pulse and temperature normal.

This patient might take, with advantage, lithia, cod-liver oil, or arsenic, internally, while he is kept at rest in bed, and leeches applied, then cold water or lead-water and laudanum applied locally. Frequently diuretics and occasional purging are useful in the early stages of the disease. If there is much weakness, quinia is given with advantage.

Later in the disease the local indications require more urgent treatment, and here iodine may be used freely, or, better, the following:

R Potass. iodid., ʒij;
Lin. sapon. camph., fʒvj;
Tr. belladonnæ, fʒij;

to be applied morning and evening.

Ammoniacal and mercurial plaster may serve a good purpose.

Internally, cod-liver oil, potass. iodid., liq. potass. arsenit., iodide of iron, and citrate of lithia, are the remedies *par excellence*. A formula now used in the hospital is—

R Effervescing citrate of lithia, gr. iij to v;
Cod-liver oil, fʒss.

Arsenic is valuable; in fact, no case should be pronounced incurable until it has been tried. If the nutrition fails, the system may be supported with stimulants, as there is no contra-indication, as in gout or rheumatism: they are not to be used in the acute form of the disease, however.

Baths should be insisted upon; for this purpose tepid water and carbonate of soda may be employed, or Turkish baths may be used. Finally, a change of climate may be of service.

PHILADELPHIA HOSPITAL.

SERVICE OF DR. H. C. WOOD.

CASE OF BRIGHT'S DISEASE, WITH LEUCOCYTHÆMIA AND DISEASE OF THE BONE-MARROW.

MICHAEL F., aged 26, native of Ireland, laborer, admitted to the hospital October 5, 1873. Family healthy, to the best of his knowledge. In May, 1865, while in Baton Rouge, Louisiana, was attacked with vomiting, which occurred every day; for this he underwent treatment, but does not recollect how long this sickness lasted. No pain or other symptoms than

vomiting. Nearly two years after this, while in Indiana, he was similarly attacked; the vomiting being accompanied with cold sweats. This spell of illness lasted three or four weeks. About a year after this, he was again similarly affected. These attacks have occurred ever since, at intervals, up to the time of admission, Oct. 5.

About three days before admission he was seized with pain in left side and back, accompanied with cold sweats. About five days after admission, commenced bleeding at the nose (profusely), which has recurred three or four times, but was eventually stopped by the use of Monsell's solution.

October 22.—Four days ago the patient commenced bleeding at the gums, which still continues. There has been no vomiting since admission.

Microscopic examination of blood showed a moderate increase of the white blood-corpuscles. The urine is distinctly albuminous.

No decided enlargement of the spleen can be made out, but the axillary and inguinal glands can be felt to be somewhat hypertrophied. The general anæmia is profound.

October 28.—Bleeding from the mouth has continued, at intervals, since the last note, up to his death, which occurred last night, from exhaustion. The oozing of blood seemed to be general from all parts of the mouth.

Autopsy.—Spleen slightly enlarged; no lymphoid points visible in it; weight 9½ ounces. Pancreas abnormally hard; weight 4½ ounces. Glands of axillæ and inguinal region somewhat hypertrophied, but scarcely larger than filberts; lymphatic structure elsewhere apparently not affected. Kidneys very small, offering on microscopical examination the usual lesions of "contracted kidney."

The tibia, when sawn open, offering apparently healthy marrow, approximating lemon-yellow, and normal in appearance. The marrow of the femora dark red, presenting the general appearances seen in cases of leucocythæmia elsewhere reported by Dr. H. C. Wood. The sawn femora were handed to Dr. R. M. Bertolet, Microscopist to the Philadelphia Hospital, for examination. He reports as follows:

"DEAR DOCTOR,—The marrow of the long bones, from the case of leukæmia, after having been exposed to the air for some time, presented an unusually soft, almost fluid mass, of a grayish-red color, closely resembling in both color and consistence muco-purulent matter which has been tinged with blood.

"The microscope showed an enormous increase of the so-called lymphoid elements, which have been described by Neumann as intermediate forms between the white and red blood-corpuscles. These lymphoid elements are quite small in size. Large cells with a distinct cell-wall were also seen, containing from eight to twenty blood-corpuscles. The fully-formed red disks, although quite numerous, were less abundant than the intermediate lymphoid forms."

BELLEVUE HOSPITAL, NEW YORK.

BY W. H. FARRINGTON, M.D.

DISLOCATION OF THE SIXTH CERVICAL VERTEBRA.

R. C., æt. 45; West Ireland; domestic; admitted November 17. Family history good. Patient drinks liquor occasionally, but never to excess. About six months ago had facial erysipelas, but with this exception her health has always been excellent. About four P.M. the day preceding her admission, patient went to visit a friend residing in the lower section of the city. The husband of the latter kicked her off the stoop, quite a high one,—then knocked her into the gutter, and bent her head over on the chest so that it touched

the pavement between her limbs, kicking her also several times in the back and on the neck. She remained in this condition several moments, and was then carried to a police-station, where she remained over night, entering the hospital this morning. After the reception of her injuries she was perfectly conscious, and could speak without difficulty, but on attempting to move found herself unable to do so. On admission, patient is a stout well-nourished woman. There is no paralysis of the face or deflection of the tongue; the mind is perfectly clear; no difficulty of speech; pupils are rather contracted. There is general paralysis of the arms, legs, and body, with the following exceptions: She is able to flex both forearms, the left one the most readily. Sensation is retained on the outer side of both forearms, but not in the hand. Sensation is unimpaired also on both sides of the chest as low down as the nipples. She is unable to extend the forearm or to move the fingers. Reflex action is very slight, the great toe alone moving when the foot is pricked. Respiration is almost entirely diaphragmatic. Complaints of pain in the back and in the neck, but no bruises are found, nor is deformity or crepitus evident. No point of tenderness found except in the lower portion of the neck on the right side behind. The extremities are flaccid. She has passed no urine or fæces since her injury. Has constant thirst, but no sense of hunger. No difficulty in swallowing. Abdomen tympanitic. Has numbness in the hands and feet, and in the legs above the feet, but how far this extends she is unable to say. Breathes without difficulty. Physical examination of lungs is negative. Hepatic and splenic dullness masked by tympanitis, but the spleen appears somewhat enlarged. The apex-beat of the heart is about an inch below and the same distance outside the nipple. No œdema of legs. Urine 1021, acid, negative. Pulse 80; respiration 28; temperature $101\frac{3}{4}^{\circ}$.

Patient was seen to-day by Professors Wood, Janeway, Sands, and Mott, all of whom deemed it advisable not to disturb her.

Dr. Sands related a case similar to this, in which the patient died in being transferred to another ward. The diagnosis made was dislocation of the fifth and sixth cervical vertebræ. P.M.—Pulse 72; respiration 24; temperature $100\frac{1}{2}^{\circ}$.

November 20, A.M.—Pulse 84; respiration 22; temperature $101\frac{1}{4}^{\circ}$. Patient is perfectly conscious and rational; talks well. Has little or no appetite, but has constant thirst. Paralysis remains about the same. Has had no movement of the bowels since admission. Urine still has to be drawn.

November 21, A.M.—Pulse 84; respiration 20; temperature $100\frac{1}{2}^{\circ}$. P.M.—Pulse 90; respiration 28; temperature $101\frac{3}{4}^{\circ}$.

Patient has been in about the same condition all day. Is perfectly conscious still; vomits a great deal; bowels have not yet moved.

November 22.—Condition unchanged.

November 23, 8.30 A.M.—Temperature 108° ; stertorous respiration; inability to speak; contraction of the pupils. Patient is rapidly sinking. Paralysis as before. Vomits up a dark coffee-ground material.

12 noon.—Temperature 107; has had a few light-colored loose stools.

1.45 P.M.—Patient died.

Autopsy by Dr. Janeway.

Exterior.—A well-nourished woman. No ecchymoses on the body. On making an incision through the skin to open the spinal column, a clot of blood is found in the dorsal region on the fascia covering the erector spinæ muscles, and also around the lower cervical vertebræ.

Vertebral Column.—The sixth cervical vertebra is dislocated forward on the seventh; the intervertebral

cartilage is ruptured, and the anterior common ligament somewhat torn; the ligamenta subflava torn on both sides, and the articular processes separated so that those of the sixth are carried in front of the seventh. Very little clotted blood on the dura mater, which is not torn.

Lungs.—Marked hypostatic congestion.

Heart.—Slight calcification at the base of one leaf of the aortic valves. Other organs are normal.

ANEURISM OF THE THORACIC AORTA RUPTURING INTO THE SUPERIOR VENA CAVA.

C. D., æt. 61; West Ireland; domestic; admitted September 18, 1873. Father died of old age, and a brother of heart-disease. Patient has been in the habit of moderate indulgence in ale and gin. No history of venereal. Had an attack of acute articular rheumatism seventeen years ago, but with this exception her health has always been good.

About one year ago, patient noticed a small tumor in the right side of the chest, near the sternum, whose development appears to have taken place without pain. She has been required by her occupation to make straining efforts in lifting heavy baskets of clothes, but knows of no further cause. About two months after its first appearance she experienced sharp pain running down the inner side of the arm to the elbow, and occasionally acute pain in the chest in the region of the tumor, but has not had any dyspnoea. These pains have persisted up to the present time. Her voice has been hoarse for several months past, but she has not had cough for the last eighteen months.

On admission, patient is an exceedingly nervous woman, of moderate nourishment. Complains principally of a tumor in the chest. Has no pain here at present. Appetite good, bowels regular, and tongue natural. Pulse natural in frequency, short and sharp in stroke, with no evident difference in the radial pulsation on either side. No difference in size of pupils. Respiration accomplished without difficulty. No cough. Voice rather hoarse, but no other symptom of laryngeal disturbance. Chest-examination reveals the presence of a pulsating tumor on the right side of the sternum, extending from the second rib downward as far as the fourth, and about three inches outwards from the right border of the sternum. Dullness on percussion exists, and a marked heaving impulse and thrill on palpation. A double murmur is heard with greatest intensity over the tumor, transmitted into the vessels of the neck. Of these the diastolic is heard most distinctly; apex-beat of heart in the fifth interspace on the mammary line; a systolic murmur heard at the apex. Lungs appear to be normal. Ordered rest in bed, and potass. iodid., gr. x, three times daily.

November 15.—General condition unchanged. Physical examination reveals some increase in size in the tumor. Complains only of slight occasional pain in the chest.

December 2.—Up to the present, patient does not appear to have suffered from dyspnoea. At 2 P.M. she was carried on a stretcher to a clinic in the hospital amphitheatre. She was, as usual, highly excited. While returning to the ward she was noticed to be deeply cyanosed, and to suffer great dyspnoea. Extremities cold, pulse small and rapid. 5 P.M.—Patient feels somewhat better, but her dyspnoea and cyanosis persist, as well as the coldness of the extremities, but in a less degree. 10 P.M.—Patient has had an attack of nausea and vomiting. Symptoms much worse than before. Pulse feeble and accelerated. She is exceedingly restless. To quiet this, sol. morph. Magend., $\mathfrak{M}\mathfrak{v}$ vi, are administered hypodermically, with temporary relief.

December 3, 5.30 A.M.—Patient continued in about

the same condition during the night, and at this hour died.

Autopsy by Dr. Janeway.

Brain and membranes normal.

Thorax.—An aneurismal sac of the size of an apple arises from the aorta at the junction of the ascending and transverse portions. It projects forwards and to the right; has eroded the second costal cartilage and destroyed the intercostal muscle of the second interspace. The aneurism compressed the vena cava descendens; and at the point of junction of the right and left innominate veins on the inner wall of the vena cava a transverse slit is found, one-half inch in length, serving as a communication between the aneurism and the vein. The former is attached to the upper lobe of the right lung.

The aorta is diseased throughout its course by chronic endo-arteritis. In the descending aorta a true aneurismal sac exists, pressing against the upper lobe of the left lung, to whose pleura it is adherent.

Heart.—Aortic valve thickened and slightly insufficient. Calcareous plate at the base of the mitral; no hypertrophy; walls normal.

Spleen normal.

Kidneys rather smaller than usual, with commencing granular degeneration.

TRANSLATIONS.

IMPORTANCE OF GELATIN IN NUTRITION.

VOIT, Bischoff, and Fr. Hofman ascertained, by a series of experiments on dogs, that the addition of gelatin to the food always reduces the consumption of albumen. This effect is observed when large as well as when small quantities of meat are fed at the same time with the gelatin. Particularly when meat is given sparingly, gelatin serves to economize albumen to a much greater degree than fats and carbohydrates. The amount of albumen which is thus saved is in proportion to the amount of gelatin given. Still, an appreciable quantity of albumen is constantly consumed, even when a large excess of fat is added. Fat and gelatin together decrease the consumption of albumen more than gelatin alone.

Gelatin is quickly decomposed after being absorbed in the alimentary tract. The experiments demonstrated that a deposit of gelatin in any one of the organs is not possible. Gelatin can therefore substitute only a portion of the requisite albumen, and not all of it. Gelatin cannot even take the place of the tissues producing it, since these originate from albuminous substances.

Voit has explained at some length his conception of the differences between the two varieties of albumen found in the human body, which he distinguishes as organic and circulating albumen. The former is a constituent of the tissues, and is decomposed with difficulty, while the latter occurs in the circulating fluids and is readily converted. The fact that neither gelatin, nor fats and carbo-hydrates, are able to prevent the conversion of albumen completely, is most readily explained by their inability to replace organic albumen and to form organs and tissues. No new blood-corpuscles to take the place of those which have been destroyed, no new muscular fibre, nor even a tissue producing gelatin, can be formed from gelatin itself. But when gelatin alone is given, a smaller amount of the organic albumen is transformed into circulating, or albuminose, so that the organism loses less albumen than it would otherwise do.

When gelatin is administered in conjunction with a little albumen, the consumption of organic albumen is very much reduced. Gelatin with an excess of albumen increases the amount of organic albumen in the tissues. Gelatin is subject to conversion, in a manner similar to albuminose, and saves albumen on account of being more readily decomposed than organic albumen.

As gelatin cannot substitute organic albumen, but only limits the conversion of the latter into albuminose, in place of which it is itself decomposed, an animal cannot be supported on it for any length of time, from want of albumen, even when fats, carbo-hydrates, and salts are given in sufficient amounts. Gelatin is, consequently, not properly a nutrient; but still it serves the purposes of nutrition in an indirect manner. It differs from other alimentary bodies in not being able to substitute any one of these completely, while fat and carbohydrates can entirely prevent the waste of fat, and while each inorganic constituent has the property of substituting itself.

Gelatin is not a plastic aliment in the old acceptance of the term, as it takes no part in the elaboration of the tissues. Even as a respiratory element it is of very slight importance, no more, in fact, than was formerly accredited to albumen. But on account of the facility with which it is decomposed in the body, it serves a useful purpose in economizing both albuminose and albumen. Its action in this respect is similar to that of fats and carbo-hydrates, but its effects are much more marked. In addition, gelatin was found to prevent the destruction of a small amount of fat. *Zeitschrift für Biologie*, 8th vol., 3d no.—*Chem. Techn. Mittheilungen von Elsner. Industrieblätter von Hager u. Jacobsen*.

ADOLPH W. MILLER, M.D., PH.D.

PREPARATION OF KOUMYS.

H. & N. SCHULTZE, of Berlin, give the following formula. Unskimmed cows' milk is mixed with a sufficient amount of sugar of milk to produce in the course of the subsequent fermentation in closed vessels, a carbonic acid gas pressure of four atmospheres. Fermentation is induced by the addition of brewer's yeast, which has been thoroughly washed. The operation is commenced in open tanks, in which the mixture must be frequently stirred. One-half of the casein, which is separated, is to be skimmed off. While the fermentation is actively progressing, the preparation is drawn off into champagne-bottles, the corks of which must be securely tied down by string or wire. They must then be removed to a cool locality, so that the fermentation can be properly completed. Three varieties of koumys are prepared, which differ in the amount of carbonic acid gas with which they are impregnated; they result from varying the proportion of sugar of milk, which is originally added.

C. Schwalbe makes koumys from condensed milk in the following manner. 100 c.c. are dissolved in a small amount of cold water; 1 gramme of lactic acid and $\frac{1}{2}$ gramme of rum are added, and the mixture is diluted with sufficient water to make it measure 1000 to 2500 c.c. This preparation is put into a Liebig's bottle and charged with carbonic acid gas. The bottle is to be kept in a warm room, and to be examined after three or four days. When there is an active evolution of froth, and when the curd is of a fine, granular consistence, the koumys is in the proper condition. It can then be kept for about eight days.—*Deutsche Industriezeitung*, p. 438, *Chemisches Centralblatt*, p. 568.

ADOLPH W. MILLER, M.D., PH.D.

PHILADELPHIA
MEDICAL TIMES.
 A WEEKLY JOURNAL OF
 MEDICAL AND SURGICAL SCIENCE.

The Philadelphia Medical Times is an independent journal, devoted to no ends or interests whatever but those common to all who cultivate the science of medicine. Its columns are open to all those who wish to express their views on any subject coming within its legitimate sphere.

We invite contributions, reports of cases, notes and queries, medical news, and whatever may tend to increase the value of our pages.

All communications must bear the name of the sender (whether the name is to be published or not), and should be addressed to Editor Philadelphia Medical Times, care of the Publishers.

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SATURDAY, JANUARY 3, 1874.

EDITORIAL.

THE ZERO OF WORTHLESSNESS AND THE ACME OF EXCELLENCE.

IT is said that misery makes strange bedfellows ; but no stranger contact can be seen than occurs in some of the crowds after an exciting and critical election, when the millionaire hustles, or is hustled by, the pauper or the rag-picker, whose bosom swells for once with pride, because he has just exercised the inalienable right of an American,—the right of suffrage,—whose being is to itself glorified by the thought that its printed decision bears as much of power as does that of the mightiest intellect or of the profoundest statesman in the land. Often does the book-shelf remind us of an election crowd ; and to-day Dives and Lazarus, wisdom and ignorance, honor and disgrace, it seems to us, are represented by two books which now jostle each other on the table before us. Of course it is not necessary to tell any of our readers what book we refer to as Lazarus. We opine that if in any intelligent medical circle of the land allusion should be made to an unnamed book as the national disgrace, nine out of ten of those present would know it was the Transactions of the American Medical Association which was referred to. Yet, like Paul, let us take courage ; let us praise the noble band of censors, the publication committee : the book is some three hundred pages shorter than its next elder brother. Let us trust that next year a publication committee may be found possessed of suffi-

cient “back-bone” to declare that nothing that is not of real scientific interest shall go into the volume, and that power be granted them to carry out the determination. What a saving of funds would there be ! What a loss to friend Collins, the printer ! Surely the title-page would be the sole solace left to him.

Dives is a book* well known to our readers, and of which every American ought to be proud. When the learned author of the work passed away, probably all of us feared lest the book should not maintain its place in the advancing science whose terms it defines. Fortunately, Dr. Richard J. Dunglison, having assisted his father in the revision of several editions of the work, and having been, therefore, trained in the methods and imbued with the spirit of the book, has been able to edit it, not in the patch-work manner so dear to the heart of book-editors, so repulsive to the taste of intelligent book-readers, but to edit it as a work of the kind should be edited,—to carry it on steadily, without jar or interruption, along the grooves of thought it has travelled during its lifetime. To show the magnitude of the task which Dr. Dunglison has assumed and carried through, it is only necessary to state that more than six thousand new subjects have been added in the present edition. Without occupying more space with the theme, we congratulate the editor on the successful completion of his labors, and hope he may reap the well-earned reward of profit and honor.

IT affords us much pleasure to state that Dr. Barnes, Surgeon-General U.S.A., was recently elected, by a vote of forty-two out of forty-six, a corresponding member of the Academy of Medicine of France. We are sure that this announcement will be highly gratifying to every American physician and surgeon. Considering the great services which Dr. Barnes has rendered to his country by the creation of the most magnificent military museum in the world, and the publication of the Medical and Surgical Memoirs of the Late War, the most copious and complete ever issued by any people, such a compliment was well deserved, and reflects great credit alike upon France and the United States. We are informed that the announcement of the election of the Surgeon-General came, very appropriately, from Baron Larrey, who accompanied it with some highly complimentary expressions.

* A Dictionary of Medical Science. By Robley Dunglison, M.D. A new edition, by Richard J. Dunglison, M.D. Henry C. Lea, Philadelphia, 1874.

CORRESPONDENCE.

TO THE EDITOR OF THE PHILADELPHIA MEDICAL TIMES.

IN the report of a case of malignant disease of the ear, with paralysis of some cranial nerves, in one of your late numbers, a considerable degree of hypertrophy of the corresponding side of the tongue was recorded among the symptoms. It was found so difficult to offer a rational explanation for this, that the possibility of a congenital malformation of the tongue was suggested.

In Dr. C. W. Burnett's very interesting and valuable report on the progress of otology, just published, I find an observation on the physiology of the chorda tympani which I had not met with before, and which throws some light on this singular phenomenon. Some experiments performed by Vulpian show that "the fibres of the chorda tympani which accompany the lingual nerve in its distribution to the tongue have the same influence on the vessels of that organ, *i.e.*, direct dilating influence, which the fibres of the chorda tympani possess over the submaxillary gland, as already proved by Cl. Bernard."

If we suppose that a more or less prolonged irritation of the chorda tympani preceded its final paralysis, this dilating effect upon the vessels affords an explanation of the hypertrophy of that part of the tongue to which the fibres of this nerve are distributed.

G. C. H.

PROCEEDINGS OF SOCIETIES.

BIOLOGICAL AND MICROSCOPICAL SECTION OF THE ACADEMY OF NATURAL SCIENCES.

NOVEMBER 3, 1873.

DIRECTOR W. S. W. RUSCHENBERGER, M.D., in the chair.

PRESENT—Messrs. Tyson, I. Norris, J. G. Hunt, Wells, Schaeffer, Buckingham, McQuillen, Allen, and Richardson.

Dr. JAMES TYSON exhibited some beautiful specimens of echinococci removed from a cyst the size of a hen's egg in the liver of a patient who died recently in one of his wards of the Philadelphia Hospital. Dr. TYSON remarked this was the first case of perfect echinococci from an hydatid cyst that he had ever seen. The *Tænia echinococci*, a small, short tape-worm composed of four joints (which develop from these echinococci), only reaches its full growth and acquires reproductive powers in the bodies of the dog and wolf. The larval cysts are each furnished, as the specimen showed, with thirty-four hooklets arranged in a circle around the mouth, and each attached originally by a sort of fleshy stem or peduncle to the membrane, forming the inner layer of the parent cyst-wall, which to the naked eye appears covered with minute granules, every one of which is found to be an echinococcus.

Dr. J. GIBBONS HUNT showed for comparison an hydatid cyst with fully-developed larvæ, from the body of a rabbit.

In reply to a question, Dr. TYSON observed that among the specimens upon the table, one in which the larvæ were mounted in glycerin showed the character-

istics in the most satisfactory state of preservation, while those put up in creasote-water soon become putrid.

Dr. HUNT inquired if any positive explanation could be given as to the way they found entrance into the liver.

Dr. TYSON replied that they probably bored their way into that organ after perforating the stomach, into which they enter with other ingesta, as is known to be the case with the *trichina spiralis*.

Dr. J. G. RICHARDSON suggested that, since these parasites were so common in the liver and rare in the spleen and pancreas (which also adjoined the stomach), perhaps ova of the *tænia* after being swallowed were taken up by the blood-vessels of the intestinal villi, and, being conveyed by the portal vein to the liver, and there filtered out as it were, thus owed their position to the blood-current in the portal circulation.

Dr. J. G. HUNT observed that he had found the best way to display the hooklets was to decapitate the echinococcus and then illuminate the head by the aid of polarized light.

Dr. J. H. MCQUILLEN exhibited a left superior central incisor tooth, the crown of which was bent at right angles with the root, and remarked that the specimen had been sent to him by J. M. Comegys, M.D., of St. Albans, Vermont, with the following history: The patient from whom the tooth was removed, when a child four years of age, fell and knocked out the left superior deciduous incisor, sustaining at the same time some injury to the surrounding parts. Several years passed over, and all the permanent teeth, with the exception of the left superior central incisor, made their appearance in due time, but, being very defective in structure, they were removed and an artificial denture inserted. After wearing these a short period, the patient noticed a fungous growth of the gum near the centre of the upper jaw, and on incising this a hard substance was found, which was pronounced to be a portion of the alveolar process. Suffering continued annoyance from this protuberance, the patient called upon another operator, who (also regarding it as a piece of the alveolar process) made an unsuccessful attempt to remove it; and, at last, the patient eventually coming under the care of Dr. Comegys, he extracted it. The specimen is unique, and illustrates a condition denominated by Mr. John Tomes "Dilaceration." The history of this case manifestly affords strong support to the position assumed by Mr. Tomes,—to wit, that the peculiar relation which the crown bears to the root is due to the fact that, by mechanical violence at a period when the crown of the permanent incisor was partly calcified, its position in the jaw was changed so that it was turned outwards or inwards, there to remain in a state of rest, whilst, the pulp being uninjured, the development of the tooth continued after the accident, with a permanent displacement of the crown. Prof. Wedl, of Vienna, objects to the term "dilaceration," suggesting in place of it flexion or torsion of the crown, and states that in cases which came under his notice the patients did not remember having sustained any injury of the jaw by falls or blows. Such accidents, however, may have occurred, and afterwards escaped their recollection.

Dr. MCQUILLEN cited a case which had come under his own immediate notice, in which a child four years of age, playing about a room, fell and struck her right superior maxilla with considerable force against the edge of a table, cutting through the outer plate of the alveolus. Sixteen years have elapsed since the accident, and the right superior canine tooth has failed to make its appearance. A very decided protuberance exists, however, on the inner margin of the alveolar process, opposite the vacant place of the tooth, which he has reason to believe is due to the presence of the

crown of the unerupted canine, whose position it is reasonable to infer was forcibly changed at the time of the accident.

A large plaster model, used for class demonstration to illustrate dilaceration of the crown of an incisor, was exhibited, and he then placed under one of the microscopes a longitudinal section of a dilacerated incisor, prepared by Dr. George S. Allan, of New York.

In this specimen the dentinal tubuli at the neck of the tooth, where the bending occurred, presented a marked crimped or crenated appearance.

Dr. McQUILLEN also exhibited two valuable and interesting specimens received from Dr. R. R. Andrews, of Cambridge, Massachusetts; one of them displaying blood-vessels in the dentine of a molar tooth; the other being a human embryo of the age of twenty-nine days.

Dr. HARRISON ALLEN narrated the post-mortem appearances of a malformation of the kidney, occurring in a case which he had recently observed. The peculiarity consisted in an elongation of the organ, and its being furnished with two ureters, which took their origin from the upper and lower portion of the hilum at a distance of about one inch apart, and, gradually converging, entered the bladder within about one-eighth of an inch of each other.

Dr. ALLEN remarked that this abnormality was entirely ignored by several high authorities, Henle alone mentioning it, and although he states it is not so rare as to be anything of a curiosity, yet it would seem to be at least quite unusual.

Dr. J. G. HUNT exhibited three specimens of the larvæ of *Anthomia* (a species of fly), which had been passed from the human intestine, and whose appearance might have caused considerable anxiety if they had remained unrecognized.

He also displayed an entire leaf of *Limnanthimum lacunosum* (one of the *Gentianaceæ*), showing curious radiating cells somewhat resembling the bone-corpuscles, but very much larger, and quite unlike those of any other vegetable tissue. During the existence of the plant these cells ordinarily contain bubbles of air, and perform the part of minute life-preservers by supporting the leaves upon the surface of the water.

REVIEWS AND BOOK NOTICES.

A PRACTICAL TREATISE ON THE DISEASES OF THE EAR, INCLUDING THE ANATOMY OF THE ORGAN. By D. B. ST. JOHN ROOSA, M.A., M.D. Illustrated by Wood Engravings and Chromo-Lithographs. New York, William Wood & Co., 1873.

"This work is intended to be a guide to those who wish to treat diseases of the ear."

These are the words which open the preface to this very valuable work; and, after a careful examination, we believe the intention of the author has been ably carried out. The work contains five hundred and thirty-five pages, and is divided into four parts, which treat respectively of the external ear, the middle ear, the internal ear, and deaf-mutism and hearing-trumpets. There is also a very interesting and accurate history of the progress of otology from the year 460 B.C. to the present time, which precedes the description of the anatomy of the auricle and external auditory meatus.

The directions for examining aural patients are very explicit, and the chromo-lithographs illustrative of the appearance of the membrana tympani are exceptionally good. The perspective of the lithographs in this work is strikingly brought out by viewing them through any short tube, but preferably with the ordinary aural speculum.

Otitis parasitica, a disease which appears to be more common than heretofore supposed, is thoroughly explained by accurate wood-cuts and a fully-condensed experience of authors on this topic.

The chapter on Injuries of the *Membrana Tympani* shows that, although many injuries to this part of the ear arise from unavoidable causes, unskilled manipulation on the part of the laity, in their anxiety to relieve the patient, may perforate or destroy this delicate membrane, which might have been saved had the surgeon been called upon for relief. The chapters of this work which contain the author's experience and views upon chronic non-suppurative inflammation of the middle ear are the prominent feature of this treatise. The author divides the so-called chronic catarrh of the middle ear, or chronic non-suppurative inflammation of the middle ear, into—1, *chronic catarrhal inflammation*, and, 2, *proliferous inflammation*. The latter term is original with the author, or rather it is, as Dr. Roosa says, an original translation of the German word *Wucherung*.

This endeavor of the author to differentiate the forms of chronic disease of the middle ear is in perfect harmony with similar endeavors of Politzer, Gruber, Weber-Liel, and others; the first-named of whom divides chronic catarrhal diseases of the middle ear into secretory and non-secretory forms; the second authority has described an otitis media hypertrophica; and the last-named writer has recently published his well-known work "On the Nature and Remediability of the Most Common Form of Progressive Hardness of Hearing," which malady, he says, cannot be referred to catarrhal causes, but even as a primary disease must be considered as a disease of the structures of the middle ear dependent upon "affections of the nerves which supply, and which stand in close relation to, the middle ear." In this attempt on all sides to describe a separate chronic disease of the middle ear, based upon a special group of pathological alterations of the component parts of the tympanum, we recognize the fact that there is a frequent form of deafness which cannot be referred to catarrhal causes at all. Therefore Dr. Roosa endeavors to describe "a form of inflammation which shows a higher formation than the catarrhal," and, while admitting that catarrhal symptoms may precede this form of disease, he shows that there is a disease of the ear which tends towards a chronic progress, and which he has "ventured to designate the *proliferous form*."

These views of the author are based upon twelve varieties of tissue-changes which have been frequently found as a consequence of this form of ear-disease, and in them we find that the prominent feature of the pathological processes is the formation of new tissue; and it is this fact that has induced and really warrants the application of the word "proliferous" to this form of ear-disease.

In the chapter on the Treatment of Chronic Non-suppurative Inflammation of the Middle Ear, Dr. Roosa says, "In one respect the treatment of the catarrhal may be fairly distinguished from that of the proliferous form. In the catarrhal form we must give a great deal of attention to the naso-pharyngeal space, while in the other we need to pay very little to it." With this exception, the outline of treatment for both forms of the disease may be the following: constitutional and hygienic, local blood-letting, applications to the Eustachian tube, applications to the cavity of the tympanum, and cutting operations upon the membrana tympani and the ossicula.

Under the head of the nasal douche the author expresses his views against its use, since he has found it to be "sometimes a troublesome and dangerous appliance."

This surely will be the case if the instrument is im-

properly used; but if the fluid injected into the nares be warm, if the vessel containing the fluid be not higher than the patient's forehead, and if after using the douche the patient do not leave his room for at least fifteen minutes, we have yet to hear of any accident such as Dr. Roosa depicts.

It is not stated, in the table which is given by the author to show the danger of the application of the nasal douche, whether *all* these rules were observed; and, although it is implied that they were, still it is not clearly shown, for the instructor in the use of the douche in thirteen cases of the sixteen unfortunate ones is either unnamed or "unknown," and in several cases the nature and temperature of the fluid injected are also "unknown," except in one case,—that of Dr. Frank,—in which it is distinctly admitted that the injected fluid was cold; and, as we are prepared to hear, the result was an acute otitis media.

We cannot admit, as Dr. Roosa does, the statement that "the instructor in the use of the douche was a physician" as a sufficient guarantee of the correctness of the instruction," for our experience shows that as a rule the patients have failed to receive *all* of the aforesaid precautions. And even if the physicians who instruct the patients in the use of the douche give proper instruction, the patients themselves may fail to follow their directions. It is obvious where the blame rests in such cases.

Operations upon and through the membrana tympani, which now form some of the most important operations in surgery, are illustrated by history, cases, and woodcuts of the various instruments employed, from "Cheselden's experiments on dogs to Weber-Liel's operation upon the tensor tympani muscle."

At the end of the fourteenth chapter we find a table showing the results of treatment of chronic non-suppurative inflammation of the middle ear, based on the observations of four observers, of whom Professor Roosa is one. In commenting on this table, Professor Roosa says, "I can only account for the fact that my percentage of cures is less than the others from the supposition that I have seen a proportionately larger number of neglected cases than falls to the lot of other practitioners."

We note, however, that the percentage of *improvement* in our author's cases is greater than that of the others. Dr. Roosa also states that he has made the standard of cure very high, and has not called a case "cured" which has only been greatly improved.

The chapter on Acute Suppuration of the Middle Ear serves to mark an era in the treatment of disease in general. Our author, firmly supported by the experience of modern otology, shows that the treatment of this form of ear-disease is not only rational and successful, but is demanded, by the exigencies of the case and the evils of neglect, from every intelligent and conscientious physician. If any one should doubt the desirability of treatment in acute otitis media, he has but to peruse the chapter on Chronic Suppuration of the Middle Ear and its fatal consequences, in order to have a good reason for changing his opinion.

"The general health of a patient affected with chronic suppuration of the middle ear is usually impaired, even if none of the serious consequences have occurred. Such a drain is not tolerated with equanimity by nature."

"Dr. Hackley has found albuminuria in a number of cases of chronic suppuration of the middle ear, where there was no apparent cause for the disease except the long-continued secretion of pus from the tympanic cavity."

One hundred pages are devoted to a consideration of the consequences of chronic purulent discharges from the tympanum, and the treatment in these very grave cases.

To this portion of the treatise Dr. Roosa has appended a table, "compiled from various sources, which illustrates in a striking manner the fatal consequences of some cases of aural disease."

The portion of the work which treats of the middle ear and its diseases closes with these words, in reference especially to the table of cases already alluded to: "Taken in connection with the fact already stated, that suppuration of the ear is more frequently the cause of cerebral abscess than any other one disease, these cases form a complete justification, if one were needed, for the giving up so much space to the consequences of chronic suppuration of the middle ear. If the table should startle some mind hitherto inattentive to this subject into a realization of its grave importance, and lead to a more careful consideration of an ulcerated middle ear, it will have accomplished its object." The remaining pages of the book are devoted to the anatomy and diseases of the internal ear, and to deaf-mutism and hearing-trumpets.

True nervous deafness, "a primary affection of the auditory nerve or labyrinth, or of both," is said to be a rare disease. In fifteen hundred cases of aural disease observed by the author, only fifty-seven could be fairly considered as primary diseases of the internal ear.

In alluding to hearing-trumpets, the conclusions are that the simpler tubular apparatus are the best, but the small "invisible tubes placed in the auditory canal are wholly useless." We close this notice with a hearty recommendation to all interested in diseases of the ear to peruse this work.

C. H. B.

GLEANINGS FROM OUR EXCHANGES.

THE ELASTIC LIGATURE (*British Medical Journal*, November 29, 1873).—On the 21st instant, Sir Henry Thompson demonstrated, for the first time in England, a surgical procedure which has been practised for some time past by Professor Dittel, of Vienna. It consists in substituting an innocent-looking elastic thread for the formidable array of knives, tourniquets, artery-forceps, and other paraphernalia with which the surgeon ordinarily approaches the patient. Before proceeding to perform the operation, Sir Henry related the curious accident by which Professor Dittel was first led to appreciate the extraordinary results which may be produced by the slight yet continuous pressure of a simple elastic thread. He was called to see a girl about eleven years of age, who was suffering from acute and severe but somewhat anomalous brain-symptoms. The case was altogether obscure; the girl seemed in other respects healthy, but could give no account of herself,—she was, in fact, at the point of death,—nor could any satisfactory history be obtained from her friends. The attack soon proved fatal, and Professor Dittel made a necropsy. It was then found that the india-rubber band of the hair-net which she was wearing had ulcerated through the whole thickness of the calvarium, and had set up meningitis. On further inquiry, it was ascertained that the girl, having been constantly scolded by her stepmother on account of the untidy state of her hair, had, about three weeks before her illness, purchased an ordinary hair-net, and the elastic thread of this net, tied round the head and worn day and night, had, in less than a month, cut through skin and bone and penetrated to the brain, and this apparently without causing any pain to the patient.

Professor Dittel at once proceeded to reduce to practice the ideas suggested to him by this unfortunate accident. He first applied it to a case of nævus of the scalp in a child; then, finding that the plan quite answered his expectations, he applied it to the removal of the tes-

ticle, penis, etc., and finally to the amputation of limbs. He has now performed, by means of the elastic ligature, a large number of operations of all kinds, including five amputations of limbs. It is not understood, however, that he proposes to apply his method to the performance of the larger amputations: these were done rather with the view of testing the capabilities of the process. The time required for the completion of an operation varies according to the amount and density of the tissues which have to be divided: *e.g.*, for the separation of the mamma from eight to twelve days are required.

The chief advantage which Dr. Dittel asserts this plan to possess is, that patients so operated on are less liable to pyæmia than those treated in the ordinary way. He bases this assertion on the experience of the numerous cases referred to above. Remembering also what a morbid dread of the knife many nervous patients have, the depressing mental effects of an operation may often be greatly diminished. Lastly, the operation itself is absolutely bloodless.

Among the operations for which it is admirably adapted may be specially mentioned *fistula in ano*, which Dr. Dittel now invariably treats in this way. One end of the india-rubber thread is passed in the eye of a probe up the sinus into the bowel, then caught, brought out at the anus, and tied; it cuts out in a few days.

The patient on whom Sir Henry Thompson operated was a stout, middle-aged woman, who was suffering from an ulcerating fibro-cystic tumor (cystic sarcoma) of the right breast. She had had a lump in the breast for twenty years, but it caused her little inconvenience till two years ago, when it began to enlarge rapidly, and finally the skin over it gave way. At the time of the operation, the tumor was of the size of a large orange, and somewhat pendulous, the breast itself being wasted; it was crowned by a large, sloughy, fungating ulcer. The ligature used was tubular, about one-twelfth of an inch in diameter, the calibre of the tube being about one-third of this. A large nævus-needle was threaded with this and with a piece of twine (the use of which was explained afterwards) and passed under the base of the tumor; the elastic was then cut, the needle withdrawn, and the halves of the pedicle tied separately.

Sir Henry Thompson remarked, after the operation, that, although this was a very suitable case for the method adopted, it was not a severe test. The only accident that could happen was the snapping of the elastic when stretched; in that case, another length was tied to the twine, which had been passed under the tumor with the elastic and drawn by it along the track of the needle; otherwise, the twine was removed as soon as the ligatures had been properly tied. The best way to avoid the occurrence of this accident was always to use freshly-prepared elastic; if kept only a month, it was very liable to become brittle.

The skin over the tumor should be tightened just before tying, so that as little as possible might be included. Sir Henry added that, as that was the first time he had operated by that method, he had been anxious to conform in all respects to the practice of Dr. Dittel; but he thought that at another time he should be disposed to make a superficial incision through the skin along the course of the ligature, so that it would be in a groove and would not be liable to slip. He thought also that this would obviate the pain which Dr. Dittel said that patients sometimes experienced during the first two or three hours after the operation; in most cases, however, the pain was slight. This patient complained of pain, apparently not very severe, for about twenty minutes after she recovered from the chloroform. Dr. Dittel's paper in the *Allgemeine Wiener Medicinische Zeitung*, 1873, has furnished very full details respecting this mode of treatment.

INTUSSUSCEPTION (*The Medical Press and Circular*, November 26, 1873).—Mr. Jonathan Hutchinson details a successful case of abdominal section for the relief of intussusception.

The patient was a child, aged two years. The intussusception had commenced at the cæcum, and was of such length that its extremity, presenting the inverted ileo-cæcal valve, was extruded several inches at the child's anus. The condition had been one month in course of development; latterly the case had been treated as one of prolapsus, and attempts had been made to keep the bowel in place by means of a cork pad. Efforts to effect reduction by enemata having failed, the child was put under chloroform, and the abdomen was opened in the middle line below the umbilicus. The intussusception was then easily found, and as easily reduced. The after-treatment consisted only in the administration of a few mild opiates, and the child made a rapid recovery.

In three other similar cases the intussuscepted bowel could be easily felt by the finger in the rectum, and in all three, in spite of persevering treatment by injections, bougies, etc., the patients had died unrelieved. From the consideration of a considerable number of cases bearing upon the diagnosis and treatment of similar lesions, Mr. Hutchinson comes to the following conclusions:

1. That it is by no means very uncommon for intussusception to begin at the ileo-cæcal valve, and to progress to such a length that the invaginated part is within reach from the anal orifice, or even extruded.

2. That the prognosis of cases of intussusception varies much; first, in ratio with the age of the patient, and secondly, with the tightness of the constriction.

3. That in a large proportion of the cases in which children under one year are the patients, death must be expected within from one to four or six days from the commencement, and is usually caused by shock or by collapse from irritation, and not by peritonitis.

4. That in many cases it is easy, by estimating the severity of the symptoms (vomiting, constipation, etc.), to form an opinion as to whether the intestine is strangulated or simply irreducible.

5. That in cases of strangulated intussusception, whilst there is great risk of speedy death, there is also some hope that gangrene may be produced, and spontaneous cure result.

6. That in cases in which the intussuscepted part is incarcerated and not strangulated, there is very little hope of the occurrence of gangrene, and it is probable that the patient will, after some weeks or months, die, worn out by irritation and pain.

7. That the chances of successful treatment, whether by the use of bougies or by the injection of air or water, are exceedingly small, excepting in quite recent cases; and that if the surgeon does not succeed by them promptly it is not likely that he will succeed at all.

8. That the cases best suited for operation are those which have persisted for some considerable time, and in which the intestine is only incarcerated; and that these cases are also precisely those least likely to be relieved by any other method.

9. That in such cases, after failure by other means, an operation is to be strongly recommended,—the only circumstances likely to cause difficulty being (1) tightness of the impaction of the parts, (2) the existence of adhesions, and (3) the presence of gangrene.

10. That in very severe cases, or where the stage is greatly advanced, it may be wiser to decline the operation and trust to the use of opiates.

11. That the operation is best performed by an incision in the median line, below the umbilicus.

12. That in cases of intussusception in young infants (under one year of age) the prognosis is very desperate,

scarcely any recovering excepting the few in whom injection-treatment is immediately successful, whilst a large majority die very quickly; and that this fact should be held to justify a very early resort to operation in such cases.

SUBCUTANEOUS DIVISION OF THE NECK OF THE FEMUR FOR BONY ANCHYLOSIS OF THE HIP-JOINT (*New York Medical Journal*, December, 1873).—Dr. H. B. Sands reports the case of a man upon whom he has operated successfully for bony anchylosis of the hip-joint. The patient was twenty-five years of age, of fair constitution but somewhat irregular habits, and had suffered from a severe attack of articular rheumatism four years previous to the time of the operation. The right hip-joint was kept in a flexed position during convalescence, and subsequently remained rigid, the thigh being considerably abducted, and flexed on the pelvis at an angle of 110° to the vertebral column. The patient could not rest the right foot on the ground without assuming a crouching attitude, and could not walk without crutches.

The rigidity being found to be due to true anchylosis, the following operation was performed. A long, straight, narrow bistoury was thrust through the soft parts just above the great trochanter, and carried directly in front of the cervix femoris, so as to separate the soft parts from this aspect of the bone. A narrow saw was introduced along the track made by the knife, and the neck of the femur divided. It was then found necessary to sever the tendons of the adductor longus and the tensor vaginæ femoris, after which the thigh was immediately and readily extended to a right line with the body, and kept there by a weight attached to the foot; the patient being put to bed and confined there for six weeks, in the hope of obtaining bony anchylosis in the straight position. As it was found at the end of that time that the parts remained freely movable, he was permitted to get up and move around on crutches. There was a shortening of a quarter of an inch. He now walks quite well and steadily with a cane, a useful and satisfactory false joint having resulted.

INTRA-RECTO ABDOMINAL EXPLORATION (*The Medical Record*, December 1, 1873).—At a meeting of the New York Academy of Medicine, Dr. Charles Leale detailed a case in which he had raised a patient from a condition of profound narcotism from chloroform-poisoning by manual irritation of the solar plexus, the hand having been introduced through the anus and rectum. This treatment had been suggested by the results obtained in a case of like character from the use of electricity over the region of the solar plexus for the purpose of increasing the force of the respiration.

Dr. Benjamin Howard was not sure but that the same effect might have been produced by striking sharply upon the epigastrium where we can come into close proximity to the solar plexus; he thought that, although admissible, the use of both electricity and internal abdominal exploration for the purpose of irritating the solar plexus of nerves as a means of resuscitation should only be employed as a *dernier ressort*.

He was of the opinion that this method of examination promises to be an exceedingly valuable one in the diagnosis of tumors and displacements of the uterus, ovarian tumors, etc., and especially in the case of a stricture at the sigmoid flexure of the colon, where so much more can be learned by the touch than in any other way. It has, however, been followed by a strong tendency to incontinence of feces, and there are cases recorded in which perforation of the bowel and death have resulted from its employment.

Dr. Peaslee would place a check upon the indiscriminate use of this method of exploration. It is justifiable when a differential diagnosis is to be made between a

fibroid cyst of the uterus and an ovarian tumor, or between the latter and a tumor coming from above, as an enlarged liver or kidney.

STYPTIC COLLODION.—The following will be found a most useful formula:

Tannin,	2 oz.;
Alcohol,	4 oz., fl.;
Ether,	12 oz., fl.;
Soluble cotton,	1 drachm and 2 scruples;
Canada balsam,	1 drachm.

Dissolve the tannin in one part of the alcohol, and the ether with the Canada balsam; then add the cotton.—*Dublin Medical Press and Circular*.

A NEW DESTROYER OF THE HAIR.—Under the above title, Dr. Boettger, in the *Memorabilien*, says that we possess a new material for destruction of hair, of a most suitable description, in a mixture of one part of crystallized sulphurate of sodium with three parts of fine carbonate of lime mixed and reduced to a very fine powder. This mixture may be kept any length of time without alteration in well-closed bottles. When moistened with a drop of water and laid by means of the back of a knife on the part of the skin covered with hair, we in a few minutes find the thickest hair turned into a soft mass, easily removed by means of water. If it remains on the part long it will cause a slight irritation of the skin.—*London Medical Record*.

URETHROTOMY IN THE AGED (*The Lancet*, November 1, 1873).—Mr. W. L. Crowther advocates median urethrotomy with digital dilatation of the prostate in those persons who, from age, debility, or chronic cystitis, are unfit subjects for either lithotomy or the lateral operation. He says the operation produces only one shock, involves no cutting, either of the prostate or the bladder, is attended with the smallest loss of blood, entails no risk of subsequent hemorrhage, and makes the smallest demand upon the reparative powers.

MISCELLANY.

CHINESE ITEMS.—In the Eleventh Annual Report of the Peking Hospital (1872) in connection with the London Missionary Society, by Dr. John Dudgeon, are to be found some interesting cases of surgery in the treatment of the "heathen Chinese." There is a sect of the Tauist religion, whose practice of tenets contributes greatly towards finding work for the lithotomist. This sect ordains that all its disciples shall practise *kung-fu* or medical gymnastics with the view of strengthening the constitution and preventing disease. Many of their practices are of the vilest and most obscene description. One of the customs which a patient of Dr. Dudgeon learned was the introduction of a short lead bougie into the urethra at night, removing it in the morning. Lead bougies are also used for the cure of gonorrhœa, and in the impotence which Dr. Dudgeon avers sooner or later follows opium-smoking. They are of various sizes, and when about to be introduced are first rubbed with mercury. The patient in question had carried on the habit for ten years, and was convinced that he had thereby not only strengthened his system, but especially improved his complexion. One morning the bougie slipped into the bladder, from which it was then cut out by Dr. Dudgeon, who found it to measure two inches and a half in length and to weigh 256 grains.

Another patient had been in the habit of introducing a chopstick into the urethra; this also disappeared, and had to be cut out of the bladder. The Chinese have a simple way of settling a case of disputed parentage by a method described with great minuteness in the works on forensic medicine. The blood of the parent or supposed parent is to be added to that of the child in a basin of water. If the two coalesce, the case is beyond dispute; but if the drops do not draw together, there is no relationship. Dead relatives are recognized in a similar manner. It is satisfactory to learn that the benefits of vaccination are beginning to be felt and understood in Peking, and that there is in the town a shop for the "sale of anti-opium pills and the diffusion of knowledge."—*London Lancet*.

THE INCOMES OF METROPOLITAN HOSPITALS.—The most wealthy hospitals are the oldest. Bartholomew's, Guy's, and St. Thomas's head the list, with an annual income each of £40,000. Then comes the London Hospital, Whitechapel Road, with its income of £26,000 and vested funds of £200,000. St. George's and St. Mary's have each £15,000 a year. King's College, University College, and the Royal Free are in the receipt of £12,000 a year; the Charing-Cross, of £10,000; and the Westminster, of £7000. Out of sixteen general hospitals, the returns of fourteen show, in the aggregate, an annual income of £220,000. The incomes of the "special" hospitals depend mostly on voluntary contributions. It is thus curious to observe that the diseases which attract the most sympathy are those which cause the most suffering. Foremost among all stand the hospitals for consumption and diseases of the chest; six of these giving a return, as a whole, of £40,947 as the receipts of the year 1870. The institutions for diseases of children show an income of £21,000. Five lying-in hospitals, out of a list of nine, have together £7500; and the Fever Hospital is able to spend £12,500 a year. Cancer, perhaps the most dreadful malady that afflicts us, receives alone £7600 a year; and, after the hospitals for eyes, ears, legs, feet, and every part of the body, come the melancholy homes of the incurables, three of which together receive £34,000 a year. The united incomes of thirty-eight special hospitals are £137,000, making, with the general hospitals, a grand total of £357,000 a year; without counting those institutions whose incomes are not returned, those, like the *crèches*, which partake of the hospital character, or the dispensaries where the poor can get medicine and advice for nothing. At least one-third of this enormous sum is raised yearly by voluntary contributions. If, it is observed, the giving of money is a proof of charity, then the Londoners are a charitable people.—*British Medical Journal*.

F. MAYHEW writes to the *Lancet*, "Eli H—, aged about seventy-five years, is now living in a village near this town. Before he was born, his father made a vow that if his wife, then pregnant, should bring him a girl, she having had three in succession, *he would never speak to the child as long as he lived*. The child

turned out to be a boy. And now what is most strange and remarkable occurred. *This boy would never speak to his father*. Moreover, during his father's lifetime he would never speak to any one but his mother and three sisters. As soon as his father died, he being then thirty-five years old, his tongue was unloosed to every one, and he has remained an ordinary loquacious individual ever since.

"The verification of this strange story is easy enough. Every one in the village was acquainted with 'dumb Eli,' and numerous living witnesses remember his dumbness passing away."

NUMBER OF PHYSICIANS TO POPULATION.—Prussia has one physician for every 3200 inhabitants, Austria one in every 4355, Hungary one in 5492, while Russia has but one for 14,166 people. In the United States, according to the census of 1870, there is one "doctor" to about every 600 of population! Enough, one would think, to justify their being placed under some uniform national regulation.—*Med. and Surg. Reporter*.

NOTES AND QUERIES.

"DR. F. R. THOMAS.

"NITROUS OXIDE GAS!"

"Only office in the city where the entire practice is devoted to extracting teeth absolutely without pain!"

"Colton Dental Rooms removed to 912 Walnut Street. Fresh gas made daily!"

"DR. F. R. THOMAS."

This glaring advertisement may be seen in any of the Market Street city street-cars, conspicuously placarded above one of the windows. If we have not been misinformed, the individual so prominently brought before the notice of the public by this means stands well with his fellow-dentists. Have all the members of the dental profession this liberty accorded them with their diplomas? Is dental surgery a department of the science of medicine, or is it a trade, a business, without a code of ethics?

We should be pleased to hear the status of the dental profession (for such it is termed) defined, in the present day of doubt and uncertainty. If such things be permitted, whither, indeed, is dentistry drifting?

Respectfully, yours,

DENS.

Answer.

Dentistry has been a business; at least we are not aware of the existence of any code of ethics. Whither it is drifting it is hard to say. The editor of the *Dental Cosmos* thinks it is drifting into a profession. *Quien sabè?*

TO THE EDITOR OF THE MEDICAL TIMES:

SIR,—An article which appeared in your journal December 6, under the title of "Tinea Sycosis," has suggested the following question, which I should feel obliged if you could answer for me:

Do the appearances given in the article referred to afford *unmistakable* evidence of a parasitic disease of the hair-follicles?

Yours, etc.,

SUBSCRIBER.

Answer.

TO THE EDITOR OF THE MEDICAL TIMES:

SIR,—In reply to your correspondent "Subscriber," I would say that microscopic appearances alone can afford *unmistakable* evidence of parasitic disease in cases like those to which he alludes.

Parasitic sycosis is one of the rarest of skin-diseases, and, when it exists, a microscopic examination will almost invariably bring to light the characteristic fungus, which is always abundant.

I am, sir, etc.,

CONIDIUM.

SATURDAY, JANUARY 10, 1874.

ORIGINAL COMMUNICATIONS.

PRURITUS HIEMALIS—AN UNDESCRIBED FORM OF PRURITUS.

BY LOUIS A. DUHRING, M.D.,

Clinical Lecturer upon Diseases of the Skin in the University of Pennsylvania.

IN the present paper I wish to describe and direct attention to a certain affection or condition of the skin of which there is no mention in any of our treatises upon cutaneous diseases or elsewhere. Quite a number of examples have been brought to my notice within the last few years; in some instances the trouble being of such severity as to call for careful investigation and subsequent treatment. Moreover, the affection about to be described has never, so far as I am aware, been separated from several other conditions of a similar nature with which it has heretofore been grouped. But the symptoms, course, and cause of the disorder appear to me to be so clearly defined as to merit a distinct and separate consideration.

The trouble varies much in degree, at one time being of the most serious inconvenience to the patient, and at other times being of so mild a character that medical advice is not sought. Thus, it may be so slight as scarcely to deserve the name disease, or, on the other hand, so severe that the individual is rendered most miserable by it. When of a mild type, for reasons presently to be mentioned, the patient endures the condition without undergoing treatment, for experience has taught him that the condition is a temporary one, and will, in due time, subside spontaneously. Previous attacks have taught him that sooner or later, in the course of a few weeks or longer, his skin will again be in a normal state, and this occurrence of the change to health is anxiously looked for. The skin sooner or later rights itself without treatment, and the patient remains free for a certain period. But, on the other hand, it may occasion such discomfort and distress that the person anxiously consults his physician, and willingly submits to any treatment, with a view of obtaining at least temporary relief. The symptoms may be so annoying and disagreeable as to render existence most unhappy for the time being. For the reason, then, that it is a trouble by no means rare, as well as one frequently requiring attention from the physician, I shall offer the result of my observations. I have designated the affection *Pruritus Hiemalis*, for reasons which I think will appear satisfactory.

Symptoms.—The affection consists in a peculiar state of irritability of the skin, which manifests itself in the autumn or even as late as the winter season. Generally it first makes its appearance with the advent of our cool October weather, or at about the time of frost. It may, however, not be noticed until later in the season—as late as

December. In Philadelphia it commonly occurs towards the latter part of October, and continues usually until the cold weather has been thoroughly established, or even through the winter. Its duration is variable. In some cases it lasts but for a few days or weeks, and then disappears entirely. In other instances it remains present persistently for several months or longer; but it is never present after the cold weather has passed. With spring it always vanishes, to be absent at least until the succeeding autumn. It is rare, however, to observe it continuing in any marked degree through the entire winter. It is an affection of the cool weather only, and more particularly of the fall and winter season. It is never present in the summer months. It is found upon individuals of all ages, from childhood to old age. No particular period of life appears to be more susceptible than another. I have never met with it in young children, nor indeed much before the age of puberty. It occurs in both sexes in about the same proportion. It may exist upon any part of the body, though prone to attack certain regions in an almost invariable manner. It is confined, not entirely, but to a great extent, to the lower extremities, and it is here that it shows itself typically. It occasionally is found upon the arms, and more rarely upon the trunk, but never to the same extent and degree as upon the thighs, buttocks, and legs. The hands, feet, face, and scalp are never involved. Its common seat is upon the inner surface of the thighs, about the knees, in the popliteal space, upon the calves of the legs, and around the ankles. It affects the non-hairy portions of the limbs rather than the hairy parts. The outer surface of the thigh and the region of the tibia are more rarely involved than, for example, the calf of the leg. The calves of the legs are favorite localities for the trouble. It attacks both lower extremities symmetrically. Occasionally only the ankles and calves are affected, but in most cases it extends well up upon the thigh. It is not a localized affection,—that is, cannot be said to exist upon any given portion of the body exclusively. The sensation may be most intense here or there, as the case may be, or it may move from time to time from one locality to another. But the same regions are usually attacked day after day, and the symptoms remain there until they disappear entirely; and hence, although it cannot be said to be localized, yet, if present at all, it is almost invariably to be found upon the regions which I have particularized.

The affection may be said to be characterized by a certain itching of the skin, more especially of the lower extremities, which comes upon the individual rather suddenly, in the course of a few days, during the autumn or early winter, and which may be described as an itching, smarting, tingling, burning sensation, as though the person were clothed in new flannel or woollen-wear, and the same were rubbing and chafing the skin. The amount of irritation present varies with different cases, and may be either very slight, so as barely to attract attention, or it may be so severe and troublesome as to cause the sufferer very great annoyance and distress. It

possesses one peculiarity which is striking, and generally present,—namely, the tendency to become aggravated towards night. It is always worse in the evening than at any other period in the twenty-four hours, and in many cases is present only at this time. In the mild form it is scarcely noticeable during the day, coming on with evening, and continuing through the night until sooner or later the patient retires and falls asleep. It is when taking off the clothes, at night especially, that the itching is most noticeable and severe. At this time the desire to scratch and rub the affected parts is almost irresistible, and the person usually gratifies this desire either until some relief is obtained or sleep terminates the suffering. A certain amount of relief follows severe scratching, and a marked burning sensation takes the place of the itching, which is far more grateful to the feelings of the patient. According to the amount of disturbance and the irritability of the cutaneous nerves, will the sleep be more or less interfered with. At times the skin is so excited and disturbed that the person obtains but imperfect rest, and at least the earlier part of the night is passed in scratching and in making cooling applications of one kind or another to the parts. In other cases the itching is simply unpleasant and annoying upon retiring, but not sufficiently so to interfere with sleep.

Upon awaking in the morning, a little of the pruritus may still exist, but usually it has quite subsided, and no further thought is given the subject until the following evening, when the same symptoms reappear, and are exactly repeated. In this manner it continues day after day, with but slight intermission, until, at the end of an indefinite period, it gradually vanishes. The patient now remains free of it until the next autumn, when in all probability it will recur and run a similar course. It may relapse in this way year after year, or at the end of the first attack it may disappear, not to return. It is apt, however, to attack the same individual several seasons in succession, and then remain away permanently. It may also continue through a lifetime.

There is no *primary* eruption of any kind connected with the affection, either at its commencement or at any time during its course. This is an important point to be remembered in connection with the diagnosis. If the skin be minutely and carefully examined at the beginning of an attack, we see nothing indicative of disease, or anything, indeed, which would enable one to account for the itching present. Inasmuch as the condition is always most marked and typical about the lower extremities, I shall describe the appearance of the skin as seen in a well-defined case the first day of its existence, for later the appearances are quite different, and call for a separate description. When the trouble is first noticed, then, the skin looks quite healthy, with the exception that it is apt to be somewhat dry. The epidermis seems normal, and there is no desquamation. The skin is neither hot nor hyperæmic. The hair-follicles are neither inflamed nor obstructed, and appear to be in order. There is no accumulation of epidermis or other matter about

their openings. They are not prominent nor visibly altered. In fact, after close inspection, it is impossible to distinguish any sign of derangement in connection with the follicles, which parts, upon first thought, we might imagine to be the seat of the disorder. Here and there an inflamed follicle may exist, but this condition, however, occurs only occasionally at this stage of the trouble.

The condition of the sudoriferous glands it is difficult to determine, further than that they do not work very actively; but there is no reason for supposing that they are in any serious way deranged, or more so upon these localities than upon other portions of the body. There is no perceptible functional derangement of the skin. Neither is there any organic alteration observable. The subjective symptoms, which the patient communicates, alone convey any idea of the condition.

But if the case be seen several days or longer after the first symptoms, the skin looks different. Certain secondary changes now exist which, if error is to be avoided, must be viewed as such. For to regard these *secondary* lesions, which at this stage are present, as the *primary* lesions of the affection, would certainly be misleading as to the nature of the disorder. It must be remembered, too, that this stage is the one in which cases are usually seen, for advice from the physician is rarely sought before the trouble has existed for some time.

The skin now may be rough and harsh, resembling xeroderma or mild ichthyosis. Many of the hair-follicles are red and more or less inflamed and irritated, with an accumulation of epidermis and sebaceous matter about their openings. Many of the hairs are also torn and broken off short, close to their follicles. Here and there, or over a considerable surface, the whole skin looks red and irritated, as though it had been well rubbed and scratched. Upon close inspection, the epidermis bears unmistakable evidence of having been torn and wounded. The marks of the finger-nails are everywhere to be seen, often in the form of long streaks up and down the limbs. In fact, all the phenomena just detailed, which are so marked and prominent, are produced solely by the hands of the patient. They are all *secondary* lesions. They are the *results* of the pruritus. To view them as the primary lesions would give a very wrong idea concerning the nature of the trouble. The line of distinction between the primary and the secondary symptoms must be clearly drawn. The primary symptoms are subjective alone. The secondary symptoms, those usually seen clinically, are both subjective and objective, the latter being an artificial product, caused by external irritants.

Such is a description of the disorder as I have encountered it through a number of seasons, and which it has been my pleasure to study and note as opportunity for observation upon new cases offered. There are other points of interest to be mentioned, which it will be more convenient to consider under the various heads of Etiology, Diagnosis, and Treatment.

Etiology.—In turning our attention to the cause of this trouble, there are a number of facts which I

have observed and noted, and which now present themselves for consideration. From these alone we shall be obliged to draw our conclusions, be they satisfactory or not, for they constitute our only aid and guide in endeavoring to ascertain the cause. One important observation, which has been universally noted, determines the fact that the condition is intimately associated with atmospheric changes. It is emphatically an affection of the cold weather, at the commencement of which it invariably establishes itself. With the first decided and permanent change of the fall season, with the first ice, it is usual to note its presence.

Now, this fact is observed not in one, but in all cases. And here it must be remembered that the observations which I am about to detail refer exclusively to the latitude and climate of Philadelphia. What the conditions may be a thousand miles north or south of this point, I am not prepared at present to state definitely; but, from memoranda in my possession,* the affection also manifests itself very commonly in more northern latitudes. In southern countries it is unquestionably more rare, if indeed it occurs at all. But upon this point I have no reliable data. In England, inasmuch as no writer upon the subject of diseases and affections of the skin has referred to the condition, we are warranted in assuming that it is very rare. As a student of dermatology I passed several months of the autumn and winter season in London, attending daily large clinics of cutaneous diseases; but I do not recall ever having encountered any cases of the trouble, notwithstanding every variety of disease and alteration of the skin presented itself. The works of English writers upon dermatology do not so much as allude to its occurrence. My experience in France and Southern Germany, especially in Vienna, extending over a period of a whole autumn and winter season at the two largest daily clinics for diseases of the skin in the world, was similar to that in London, the condition never having been noticed. Nor do the German writers mention its existence in their treatises upon cutaneous disorders. But to return.

It occurs in persons otherwise in excellent health. The various other functions of the economy appear to be in perfect order. The nervous system, so far as can be ascertained by symptoms, shows no signs of general impairment or derangement. The bowels are not constipated, nor are any of the secretions apparently abnormal.

The affection is found upon people of all ages, and is not common to any particular period of life. It is observed upon the young as well as the old. As already stated, it occurs in both males and females. At times it is seen in several members of the same family. It is found equally among those who live in luxury and comfort, and those dwelling in poverty. It occurs among the black race. It is as common in the houses of the wealthy as it is in our almshouse. No class of society is exempt. It is not a condition caused, or in any way influ-

enced, by neglect of person or by inattention to cleanliness, for it exists in no greater proportion among the dirty and unwashed than among the clean. It is as frequent among bathers as among those who never use the bath. It is present both among those who bathe in cold and those who bathe in warm water. It is as common among those who employ the bath every day as among those who use it more seldom. From these facts it will be noticed that water possesses very little influence in either its prevention or its causation.

Here it will be in place to refer to a series of investigations which I have made during the past month (December). Feeling assured from previous experience that the condition was in all probability to be found among all classes of a community, I was induced to examine a large number of people. My investigations were undertaken with a view of ascertaining to what extent the disease existed; also, if examples were found, for the purpose of studying them and corroborating previous observations. The results of my labors may be summarily stated as follows:

The wards of the Philadelphia Hospital (Blockley) and the Almshouse were selected for the purpose.† Both sexes, all ages, as well the cleanly as the uncleanly in personal habits, were included. Four hundred and twelve persons were examined. Of this number two hundred and twenty-seven were men, and one hundred and eighty-five were women. They consisted of cases from the hospital who neither had been nor were confined to bed, and also paupers from the almshouse.

Out of the whole number, four hundred and twelve, twenty-two cases of the disease were found. Fourteen were among the men, and eight among the women. Each of these cases was carefully examined, and the diagnosis fully established. Some of them were slight, while others were more severe; but there was no difficulty in recognizing the trouble in any of the cases. None of them, however, were of such severity as several of the cases which have come under my notice in private practice. Among the patients examined there were examples of pruritus whose exact nature seemed somewhat doubtful; these were excluded.

From these figures it will be seen that upon an average the condition exists in one out of every twenty persons who are otherwise in ordinary health. Whether this ratio holds good among the upper classes, who are better cared for and nourished, we have no means of determining positively at present, but there is every reason to think that it exists quite as frequently.

The disease is not caused by any peculiarity in the clothes worn. This is a point about which I desire to speak more at length, for there exists an impression in the minds of some that the condition I have been describing is simply an irritation of the hair-follicles and skin, due alone to the coarse, irritating undergarments usually assumed at this season of the year. Flannel and woollen goods, especially,

* I am indebted to Dr. Wigglesworth, of Boston, for certain notes relating to the affection as there noticed by him.

† My thanks are due to Dr. Linn, Resident Physician to the hospital, for the many facilities received in pursuing the investigation.

have been cited as being among the direct causes of this pruritus. But investigation and accurate observation, I think, will prove the error of this idea, which has obtained credence with some. Patients themselves at first are likely to attribute it to such causes, but subsequent experience proves even to them that such is not the case.

Now, neither flannel, woollen-wear, nor rough goods of any description, are the direct causes of this form of pruritus, but when they are worn they always tend greatly to aggravate the condition. In fact, not only do such garments increase the itching, but patients find it intolerable to use these fabrics, on account of the irritation which they provoke. The skin is so excited that such goods are unbearable, and the patient soon learns to shun them once and forever. Clothing, whether new or old, whether of wool or of cotton, then, is not the primary cause. For here also clinical experience proves that the affection exists upon persons who have never worn woollen or other rough undergarments of any kind. It occurs in those who are most careful in avoiding harsh irritating underclothes, and also in those who wear only the finest linen next to the skin.

External irritation, therefore, has no share in the primary cause.

Diagnosis.—We come now to speak of the diagnosis; and here I must state that the trouble we are considering has manifestly been confounded with other conditions of a similar character. It is by no means a rare disorder. It is to be seen every season at our clinics for diseases of the skin, but it has been associated and confused with other diseases to such an extent that its individuality has been lost. The fact, moreover, that it may occur in so many grades of severity, from the mild to the most aggravated type, has tended to render its true character somewhat obscure.

The affection primarily is a pruritus of the skin. By the word pruritus I mean a functional disorder of the skin unattended by an eruption or breaking-out, and whose only symptom is itching and other like sensations. In the trouble we are discussing, then, there is no rash or change of any kind in the texture of the skin. The symptoms are simply itching, burning, and smarting of the skin, unaccompanied by any visible cause. Such is the primary condition of the disease. The secondary stage shows us these same symptoms present, and, in addition, other signs which must be here referred to. With the advent of the pruritus the patient at once begins to scratch, the desire being so strong that it is not to be resisted. The rubbing and scratching are often inordinate, and this process continued night after night, for perhaps several hours at a time, necessarily irritates the skin. The epidermis and hair-follicles suffer first, and about the openings of the latter a slight congestion is soon induced, which is kept up by the constant renewal of the cause. The hairs are broken off, twisted, and torn by the violent scratching and rubbing. Many of them are completely destroyed, and usually in a short time certain parts of the limbs are entirely devoid of hairs.

The follicles likewise are often obliterated, leaving a smooth, bald surface, which remains. The appearances at this stage may be manifold. The skin may be harsh, dry, and rough; or it may be smooth and natural. This varies according to the general condition of the skin. Frequently a certain amount of desquamation is present, covering parts of the limb as fine detached bits of epidermis. Scratch-marks can almost always be seen now if looked for, and generally they are noticeable even upon a casual view. Often they are observed as long streaks showing the tracks of the finger-nails. Signs of blood are more rare. Here and there, however, torn and lacerated follicles are seen, some of which may show a small quantity of fresh or dried blood. In some cases congested follicles appear in numbers; they are red, and appear acutely deranged. They may be somewhat obstructed with epithelium and epidermis, or they may assume the look of little elevated points. The intervening skin is generally more or less red and irritable. In other cases, in place of these symptoms nothing abnormal is to be seen, the scratching having little effect in producing artificial lesions.

All these visible symptoms, then, must be considered as artificial, as caused by the operations of the patient in the endeavor to get relief. They subside rapidly upon the cessation of the scratching or other mechanical irritation, whatever it may be, and are soon lost sight of, remaining away until irritation causes them again to appear.

There are two diseases with which pruritus hiemalis may be confounded. I refer to lichen pilaris, and prurigo as understood in this country.

Without entering into any differential diagnosis, I shall point out, in as few words as possible, wherein pruritus hiemalis differs from the two conditions just enumerated. The lichen pilaris of authors, as the name indicates, is a certain disease involving the hair-follicles of the skin alone. As described by several writers of the present day, it consists in an accumulation of epidermis and sebaceous matter about the openings of the follicles. This state of disease is the primary and only one. Itching may or may not be present; frequently it is absent. Lichen pilaris is commonly seen upon those who do not bathe, the masses of epidermic product being permitted to remain about the hairs, where, by degrees, a slight conical elevation or papule is formed, the hair or its stump perforating the centre of the accumulation. The affection is usually located upon the thigh, and especially the outer surface, where it is, as a rule, the most marked. Other parts of the body may also be affected in like manner. It is a condition speedily relieved in the majority of instances by the free use of hot baths and soap, which, by mechanically removing the obstruction of the follicles, permits these organs again to assume normal action.

From these few general points it is plain that there can exist no connection between lichen pilaris and the pruritus which I have attempted to describe. It will, I think, be seen that they are totally different conditions, having in reality little or nothing in common excepting that they are apt to occur at

about the same time of year; but other affections of the skin are likewise prone to show themselves in the fall and winter, and this, therefore, must be regarded merely as coincidence.

Lichen pilaris has its favorite seat about the outer surface of the thighs. Pruritus hiemalis occurs anywhere upon the limbs, with predilection for the less hairy parts. Lichen pilaris never occurs in the popliteal space. This is one of the common localities in which to find pruritus hiemalis. Many other differences there are, which will be noticed by comparing the symptoms of the two disorders side by side. I dwell upon this subject, because it has long since occurred to me that the pruritus we are discussing, particularly the secondary stage, has been associated with lichen pilaris. In many instances this undoubtedly has been the case.

With *true* prurigo, the prurigo of Hebra, we have the formation of distinct plastic papules: hence this pathological lesion alone is sufficient to distinguish the two affections.

Itching, scratching, excoriations of the skin, and other like symptoms due to the presence of pediculi, are here referred to merely for the purpose of mentioning that they have no share whatever in the pruritus we are discussing. They may possibly exist coincidentally at times, just as pediculi are liable to be found upon any person, but they are never the cause of the disease. No more need we even suspect the presence of any of the vegetable parasites as a cause.

Pruritus, or itching of the skin, is a term under which are included many varieties. The word pruritus, used alone, simply informs us that there is an itching of the skin, but fails to state the nature or cause of this sensation. Pruritus may be produced by many causes, due to derangement or disorder of one kind or another in the cutaneous surface. This subject interests us here only to the extent that we may be able to distinguish the variety which we have designated "*hiemalis*" from the many other kinds which are encountered.

Once recognizing the trouble as a pruritus, it seems as though there could be little danger of confusing it with any of the other forms. When all the symptoms are taken into consideration, there really exists no other variety which runs a like course with similar symptoms. The fact of its being an affection of the fall and winter season only, stamps its individuality at once. Its almost exclusive habitat—the lower extremities—is another peculiarity which it is important to remember. The particular parts of the limbs almost invariably involved also must be borne in mind. The almost entire freedom during the day, and the constant attack towards night, and especially upon the taking off of the clothes, are also characteristic.

Treatment.—With reference to the treatment of this form of pruritus, my experience has been confined to some twelve or more cases which have from time to time been under my care; about half being in private practice and the remainder in dispensary practice. I shall briefly give the results of the various remedies employed. First, as to water.

Plain water-baths, whether hot or cold, do not appear to exert much permanent influence over it, but, of the two, hot water more often affords some relief. The cold douche to the parts frequently gives temporary ease, and allows the patient an opportunity of getting asleep. A course of continuous daily bathing in cold water, kept up for the season, does not seem to exert any favorable influence. A warm bath daily, however, upon going to bed, will often insure the patient more comfort. Turkish baths have been employed, but with no success in relieving the symptoms. A course of thorough soaping with soda-soap, and afterwards a warm plain bath, has also been used, but with no better result than the simple bath. Where the scratching and other secondary lesions are marked, this course of treatment is not to be recommended, for, the skin being wounded, the soap together with the friction only increases the already irritable skin. Better success, however, may be found in the use of the alkaline bath, which affords more permanent relief than any other treatment with which we are familiar. The bath is prepared by dissolving four ounces of the carbonate of soda in a full-sized bath-tub of warm water. The water should be sufficiently hot to allow the patient to remain in it without feeling at all chilly. The patient should stay quietly immersed in the water for twenty minutes. Upon getting out of the bath the parts should be slowly and gently dried by patting with a soft dry towel. No rubbing or friction should be indulged in, for, though gratifying at the moment, the after-effects show the skin to have been greatly excited and the trouble aggravated.

The bath should be taken in the evening, just before retiring. The patient should wear a light night-dress, and sleep as coolly as possible; the bed should be hard,—preferably a mattress,—and the covering just sufficiently warm to prevent a feeling of chilliness. The sheets should be of soft muslin or linen.

During the daytime, linen, muslin, or the so-called Canton flannel underclothes should be worn, and all garments of a woolly nature discarded. Everything must be done to soothe the irritable skin in all possible ways. Heated rooms and hot stoves must be avoided. During the evening a walk in the cool air will be much more grateful than the warm room; for if the itching be inordinate in a hot, dry atmosphere, and the patient suddenly go into the open air, it will be found that the symptoms will to a great extent subside. As is well known, these remarks apply to almost all forms of pruritus, but they are especially applicable to the kind I am describing.

As with other varieties of pruritus, simple rubbing, or scratching with the finger-nails, unless it be excessive, does not produce any great amount of laceration of the skin. The patient may scratch quite severely at night, and yet, upon awaking, find very little trace of the performance. This remark supposes the case to be a mild one. If the case be severe, the scratching will necessarily be violent, and the skin will then show signs of the destructive work which has been done.

With reference to internal treatment I have little to suggest, for, though preparations of iron and arsenic have been employed in certain cases, unfortunately there is nothing favorable to report.

From what has been said, it will be evident that the affection must be regarded as a pruritus. The symptoms from which we are forced to deduce our conclusions are purely subjective, and hence, unless we venture into the domain of theory, our remarks concerning the pathology must soon come to a termination.

In the present state of our knowledge very little is positively known concerning the nature and pathology of neuroses. In the condition described, further than that it is a pruritus of a certain kind, accompanied by a series of well-marked and constant symptoms, our information does not permit us to go. What changes take place in the skin in order to give rise to these symptoms, it is impossible to ascertain. An irritability of the skin, taken as a whole, unquestionably exists, but in what particular organs or parts the derangement occurs it is not possible at present to determine. To suggest that the disease has its origin and is located about the follicles, and that all the symptoms may be referable to derangement of these organs, is a theory attractive and perhaps plausible, but in the present state of our knowledge more definite information is required before adopting this view.

In brief, to venture further in theory as to the exact nature of our trouble is not consistent with the tenor of this communication. Positive knowledge upon such points relating to anatomical and pathological changes is alone desirable, if we would advance our subject in a scientific manner.

ACCIDENTAL HEMORRHAGE DURING PREGNANCY.

BY H. LEAMAN, M.D.

ACCIDENTAL hemorrhage, occurring during pregnancy and preceding labor, embraces all hemorrhage which may take place from accident of any kind, excluding placenta prævia or unavoidable hemorrhage, as well as all effusions of blood which may occur of a vicarious character in other tissues and organs.

It has its seat in the vascular system of the uterus or in that of the fœtus. It may occur early in pregnancy, in the form of effusion from the general uterine surface; later, the hemorrhage is most commonly due to a separation of the placenta from its uterine attachment, or to a rupture of the umbilical cord. Effusions are due to an increased flow of blood to the organ, which begins with conception. The separation of the placenta may be brought about by mechanical violence, and by vascular or nervous derangement. A rupture of the cord may be due to a shortness, an irregular distribution of the vessels, or a degeneration of the envelope of the umbilical vessels.

The hemorrhage may be open, the blood finding its way between the membranes and uterus, and

appearing externally. In concealed hemorrhage the blood may be retained beneath the placenta and within its circle of attachment; it may be retained between the membranes and the wall of the uterus; or poured into the amniotic cavity,—intra-amniotic.

Dr. Meadows gives the statistics of Dr. Churchill, as follows: in 257 cases of accidental hemorrhage 34 proved fatal, or one in seven; while of 292 cases of unavoidable hemorrhage 79 proved fatal, or one in three and a half; and out of 365 cases of post-partum hemorrhage 25 proved fatal, or about one in fourteen.

Cazeaux says that hemorrhage occurring early in gestation is more serious to the child; in the latter part, to the mother; especially dangerous to the mother between the seventh and eighth months. That the life of the mother is in little danger in the early months of gestation seems to me to be sustained by experience, as well as by the very common practice in our day of interfering with the product of conception either by drugs or instruments. One case came under my notice in which the woman was suffering a severe hemorrhage, from which she readily recovered. She confessed that it had been brought on by the use of an instrument in her own hand, and that it was the seventh time she had succeeded. She showed us an old well-worn Simpson's sound. Very recently a similar case has come under my notice, and such cases, I believe, are not new. When death does result from these cases it is generally due to a typhoid or inflammatory condition. Hemorrhage occurring within the last three months, however, is an entirely different thing. How to act under these circumstances, when two lives are hanging by very tender threads, and when we may be the means of cutting one or both, requires all the wisdom we can command, as well as the inspiration of an Hippocrates. To illustrate my subject, it seems preferable to give the narration of a case which came under my care in the early part of the past spring.

Mrs. Anna McBride, aged 32 years, the mother of six healthy children, pregnant with her seventh, was taken with a slight hemorrhage between the fifth and sixth months of gestation,—February 21, 1873. Two or three days' rest relieved her entirely, and she went about her household duties as usual. These were not of the lightest character, such as doing the washing for the entire family, and carrying it to the top of a three-story house to dry, cooking for boarders as well as for her own family. On the 27th of April, 1873, four o'clock A.M. Sunday morning, I was again called to see her with a similar hemorrhage, just two months and six days after the previous attack. The flow had commenced while she was asleep. When I saw her she was perfectly comfortable, and was losing moderately. She was positive that she was six weeks from her full time, and was certain that she felt the movements of the child. As she had no pain, I gave her directions to be perfectly quiet and keep her bed. I saw her again at nine A.M. She had not changed in any respect; she had no pain, and reassured me that she felt the movements of the child, and that her time was not yet up. I ordered her half-drachm doses of the fluid extract of ergot every hour or two, with directions to send for me at once if there was any increase of the flow. She sent for me at 12 noon; not being in, and no one present realizing the danger, she remained without medical help until I reached her, at half-past one. She

was then exsanguineous, gasping for breath, her pulse flickering. She had bled until there was just enough of blood remaining to keep the heart beating. The tampon was immediately applied, and the little of life that remained was carefully fed with milk, whisky, and air. I watched her and remained with her until four o'clock P.M. At six o'clock she had scarcely reacted any, and was still in a state of syncope, although she had lost not a drop of blood since the application of the tampon. It was not until late in the evening that the pulse became regular and her consciousness restored. She was well fed during the night with whisky, eggs, and milk, and was undoubtedly stronger when I saw her on the morning of the 28th. There was no evidence of hemorrhage externally, and her improvement indicated none internally. At this time Dr. Deal saw her with me, and agreed that it was prudent to gain a little more strength before delivery should be undertaken. The tampon was allowed to remain, but, as there was apparently some distress from tension, it was slightly relaxed. At one o'clock, finding her weaker, Dr. Deal was again called in, and it was agreed that to terminate her labor was the best we could do. The membranes were broken, and delivery accomplished by turning. The placenta came away with the child, and there was no blood accompanying it. The child was dead, and the cuticle over the entire surface of its body came off with the slightest pressure, as if it had been blistered. The womb contracted firmly, and, with the hand kept upon the uterus, and all assistance we could give her, she expired an hour and a half after delivery.

There was no placenta prævia; the bag of waters could be distinctly felt in the mouth of the womb. It was believed to be most likely a detached placenta, and probably brought about by the heavy duties of her household. The first flow two months previous was most likely due to a very slight separation of the placental surface. The child was a full-sized male, and its development had been very recently interrupted.

How was it possible to know before nine o'clock A.M. Sunday morning what ought to have been done? Delivery before that time at the peril of the child might probably have saved her. After the profuse hemorrhage between twelve and one o'clock, there was no time at which delivery promised much. Here was moderate hemorrhage becoming profuse in a few hours. How is it possible for us to know when this change is likely to take place? The treatment of moderate hemorrhage before labor, as laid down by M. P. Dubois, and as given by Cazeaux, is as follows: "Horizontal position, absolute rest, fresh air, cool acidulated drinks, restricted diet, venesection; if there are any symptoms of plethora, empty the bladder and rectum. When the hemorrhage is profuse, the same measures, except venesection, are to be used, with the addition of one-half drachm of ergot, divided in three doses, at intervals of ten minutes. And if these are insufficient, apply the tampon or perforate the membranes."

Can we separate the treatment in this manner? Where can the dividing-line be drawn? From four o'clock A.M. until nine A.M. the flow was undoubtedly moderate; yet within the next three hours it had become profuse. What is best to be done in such cases must of course be left largely to the skill, foresight, and judgment of the physician; and yet might we not arrive at something more definite in the way of treatment?

The treatment of hemorrhages early in gestation,

such as those already referred to as being rarely fatal, is accomplished almost entirely by rest. The gradual enlargement of the vessels, with the increasing size of the uterus, augments the danger with each succeeding month. During the last month, according to Cazeaux, the danger is again diminished, owing to the more easy dilatation of the neck.

THE OPIUM-HABIT.

BY W. D. MARTIN, M.D.,

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OPIUM-EATING is seldom spoken of by lecturers in our medical schools. In medical journals, also, the subject is rarely mentioned; and, in consequence of the adroitness of the votaries of opium in concealing a bad habit, the physician in private practice scarcely ever confronts this vice. There are few, therefore, who are familiar with the subject,—one of much importance, now that the use of opium as a stimulant is greatly on the increase in the United States. I have noticed its abuse by physicians, female teachers, servant-girls, and even by farmers' wives.

Seven cases have come under my observation; and I relate the following, a typical case, where, as in the majority of instances, opium was used exclusively as a stimulant:

Early in the year 1867, a gentleman, 28 years of age, in good health, by profession a civil engineer, began the regular use of opium as a stimulant, having for a year before that time merely tampered with it on occasions of despondency and gloom. Engaged in a survey of public lands in remote and lonely situations, his spirits became depressed, and it appeared to him that solitude and misfortune were to be his lot. Under these circumstances he occasionally indulged in alcoholic stimulants, and after a time in such excess as to materially interfere with his duties as an engineer. Realizing this at last, and having read of opium and its extraordinary powers as a stimulant, he had recourse to it when unusually depressed in mind, and finally became habituated to the daily use of the drug.

Beginning with gum-opium, he occasionally rolled up a small piece and swallowed it; but, experiencing unpleasant digestive derangements, pressing constipatory effects, and intense itching of the skin from the use of opium in that form, he employed the salts of morphia. He carried the *sulphate* in a little vial, and used from time to time the indefinite quantity he found necessary to calm his perturbed mind: thus he became addicted to a stimulant, the abuse of which finally became indispensable to a comfortable existence.

As an antidote to whisky he found it perfect. It soon ceased to disturb digestion; it did not flush his face or proclaim itself on the breath; his bowels, though constipated, appeared conveniently so, as he was not bothered with their evacuation more than twice a week, and he could comfortably retain his urine for twenty-four hours. His muscular system was steady, he slept well, his mind was calm and satisfied under all circumstances, and he experienced a strange and agreeable buoyancy, a self-reliance, and a nonchalant happiness all the time.

When I first saw him he had used morphia for four years, had experienced its pernicious effects, and had made several attempts to abandon the habit. At this time he found that, notwithstanding a considerable retrenchment of his daily allowance, he was using eight

grains of the sulphate of morphia per diem, or one drachm per week.

He was sallow, with hands without moisture, and his finger-nails were brittle, his eyes were dull, his mouth and lips dry, the secretions were scanty, the bowels constipated, and he was occasionally subject to temporary, but distressing, bilious diarrhœa. In addition to this, his hair was dry and husky, the skin inactive and itchy, and he had inveterate pityriasis of the scalp.

In disposition he was inert, lazy, forgetful, disposed to sleep, which was uncertain and troubled by dreams, in which he started up in bed, his mind a prey to vague terrors. On this account he often used chloral at night, which, though it produced sleep, exacted an equal number of nights of wakefulness when he discontinued its use. He could not take stimulants for some days after chloral, on account of an intense erythematous blush of the skin which invariably followed, and caused a violent beating of the carotids against his pillow that effectually banished sleep. The sexual function was impaired; and finally he was anxious, nervous, and desirous of freeing himself from the power of opium.

Now, what are we to do for such a case? Diminish very gradually and circumspectly the amount of opium used until the system can do without it? This is quite impracticable, if not impossible, unless the patient is under restraint. Shall we suddenly suspend the poison and sustain the system? This treatment has been employed with success, but it results in great suffering, is also dangerous, and, according to my observation, will not do for bad cases, which are so debilitated after recovery from opium-poisoning that they fall easy victims to pneumonia and kindred affections.

With reference, however, to the train of symptoms to be expected when from any cause opium is suddenly withheld from a person accustomed to its use, I quote from Dr. Flemming, of Birmingham, England, whose method of treatment I have followed, and who treated his cases by suddenly suspending the drug, as recommended by Dr. Christison in 1850:

"Having put a stop to the indulgence, you must be prepared for a great increase in the mental as well as in the bodily suffering of the patient. He is a prey to intense depression; he is sleepless, excessively irritable, full of alarms as to his condition, and will—unless he be a man of unusual strength of mind—pitifully implore you to allow him an opiate to relieve his distress, declaring, if refused, that his life is in danger. At the same time he suffers much from pains in various parts of the body, but especially in the stomach and bowels; the pulse rises much in frequency—I have known it as high as 120; the tongue coated with white fur; there is unceasing thirst, and a total loss of appetite; the bowels, which were formerly confined, are now much relaxed, and a state of diarrhœa is established; the skin softens, and finally sweat pours from the surface."

Under these circumstances Dr. Flemming employs a combination of lupuline with phosphoric acid,—a nauseous dose, but comforting and soothing to the patient; lessening the force of his suffering, and making it tolerable in some cases within a week.

R Acidi phosphorici diluti, ʒx;
Tr. lupulinæ ad ʒxxx.—M.

S.—ʒii every four hours, one hour before food, in a wineglass of water.

With regard to diet, the patient is directed to have at first milk and beef-tea alternately every four hours until the appetite improves, when a stronger diet may be substituted. At night, if wakefulness is protracted, tinct. cannabis ℥xxx with spts. ether is employed with happy effects. In this way the patient and opium may be violently separated, but too often he yields again to its superior power before he can forget its blandishments. The will is too weak, the power of habit too strong.

So far as I am aware, no direct antidote to opium which is powerful enough for a case of this kind is known, but it has always appeared to me that there might be some *substitute* which by combination with other remedies, by a diminution of one and an increase of another, might *insensibly* supplant opium in the system. With this view I have made experiments with different drugs, with nostrums, and with proprietary medicines of several kinds. As the result of my experience, I venture to state finally with regard to some of the latter that the terms I have mentioned appear to be realized. If this is so, the fact is probably familiar to others, who ought to give an opinion on so important a subject.

CASE OF IDIOPATHIC TETANUS SUCCESSFULLY TREATED BY HYDRATE OF CHLORAL AND BROMIDE OF POTASSIUM.

BY W. S. MAXWELL, M.D.

EMMA W., aged four years and six months (colored), was taken on June 20, 1873, with griping pains in the epigastrium, intense thirst, occasional spasm, and some rigidity about the back. June 23, I was called in. She presented marked symptoms of tetanus: the jaws were partially closed and stiff, deglutition difficult, tongue dry, bowels constipated, trunk and extremities rigid, frequent spasms, breathing short, hurried, and anxious; no fever, pulse natural when quiet.

As to the history of the case, the mother told me that the child had eaten some berries in the woods the day before she was taken, and from her description I supposed them to be berries of the *Atropa belladonna*. The treatment commenced with a laxative, plenty of milk and whisky. Opium, cannabis Indica, quinine, and oil of turpentine were used, but to no purpose; the symptoms grew worse. On July 1 I ordered the following, stopping all other drugs:

Take of Hydrate of chloral,
Bromide of potassium, āā ʒiiss;
Water, ʒii.—Fluid solution.

Label.—Teaspoonful every three hours.

From the first there was marked improvement, and after continuing the remedy for a week the child was cured. She has enjoyed good health since.

STILL POND, MARYLAND.

IODOFORM ON VENEREAL ULCERS (*The Medical Record*, October 15, 1873).—Dr. G. O. Morrison-Fiset adds his testimony to the value of iodoform as a local application to venereal sores. He has found it of great use either in powder or suspended in glycerin.

TRANSLATIONS.

MYELOGENIC LEUCÆMIA.

DR. HUBER, in the *Deutsches Archiv für Klinische Medicin* for October, 1873, reports the following case of leucocythæmia:

The patient, a day-laborer, 43 years of age, came under treatment in October, 1870. His parents died advanced in years, and his only brother had good health. During the preceding eight years the patient had been subject to occasional chilly sensations of short duration, but there was nothing else to warrant the assumption of the existence of intermittent fever. For two years he had been complaining of loss of strength, cough, and dyspnœa. The skin was pale, temperature not increased, pulse regular, tongue clear, appetite and daily evacuations not affected. The lymphatics were not enlarged; legs were œdematous; no abnormal signs in chest; liver not enlarged; the spleen extended to crest of ilium and to the median line.

The urine was pale yellow, with a deposit of triple phosphates and urates. The proportion of red to white blood-corpuscles was ascertained to be two to one.

Death occurred the following January, ushered in by increasing dyspnœa, cough, and repeated epistaxis. The white blood-cells were very large, and some apparently contained yellow pigment-granules. In December he had an attack of pleurisy, with orthopnœa and cough. Urine was then still acid and full of urates. He had also a pustulous exanthem on the chest ten days before death.

The ribs, sternum, and sacrum were found to be full of dirty, greenish-yellow marrow. The spleen was twenty-five centimetres long and twelve centimetres broad, and was dense and resisting, with no attachments. The left pleural cavity was full of serous exudation. In the left ventricle of the heart were found a few drops of blood resembling pus.

Specimens were sent to Prof. Zenker, in Erlangen, who reported that under the microscope the splenic trabeculæ showed an unusually marked and symmetrical development. In the spaces, as in the splenic veins, were found fine spindle-shaped bodies sparsely distributed. These resembled those, unfortunately, still unknown crystals which have been frequently noticed as accompanying leucæmia, and which are by me considered as constant. The marrow of the ribs is strikingly soft and pulpy, is grayish red, and appears to be almost entirely composed of a multitude of medullary cells representing an uncertain transition stage between red and white blood-corpuscles. The crystals referred to existed in greater abundance in the bone-marrow than in the spleen or blood.

FRANK WOODBURY, M.D.

DISLOCATION OF THE SARTORIUS TENDON (*The Lancet*, November 8, 1873.—Mr. Hill reports the remarkable, and probably unique, case of a man, æt. 40, who, while squatting on the floor of a wagon, was fallen upon by a companion whose weight came on his bent knees. When he attempted to rise, the action caused him great pain on extending the leg, especially beyond a certain point. It was found that the sartorius tendon was dislocated backwards by the rupture of its anterior fasciculated expansion. The leg was first flexed until the swelling had subsided, and then put up in a straight back-splint with a foot-piece, a pad being placed over the tendon. At the end of a fortnight the limb was encased in a gum and chalk bandage, and a perfect cure was soon obtained.

RAPID DILATATION OF THE UTERINE ORIFICE (*British Medical Journal*).—Dr. Ellenger, of Stuttgart (*Archiv für Gynaekologie*, vol. v., fasc. 2, 1873), insists enthusiastically on the merits of rapid dilatation of the os and cervix uteri by his instrument. He considers that it ought to supersede sponge-tents, laminaria, and all other methods of slower dilatation. His instrument is based upon those of Perrève and Holt, used in rapid dilatation of the urethra; partaking, however, of the character of a speculum. The cases which he gives as especially suitable examples of success include examples of stricture of the cervical canal, stenoses associated with uterine flexions and deviations, menorrhagia due to softening of the parenchyma, to hypertrophy, or to uterine tumors, retention of disordered secretions in the cavity of the uterus. In one case, where the patient was suffering with hysteria and retroflexion of the uterus, forced dilatation cured a very obstinate neuralgia of the trifacial nerve.

VEHICLE FOR THE ADMINISTRATION OF CHLOROFORM.—A French medical journal remarks that the best course is to dissolve the chloroform in glycerin (1:3), which is effected with tolerable facility, and gives a very clear solution, pleasant to the taste, and with a strong odor of chloroform. This solution can be mixed in all proportions with water without the occurrence of any precipitation, though the odor is distinctly perceptible. In forming the mixture, it is well to add the chloroform slowly and to mingle the two thoroughly. It should be left at rest for twenty-four hours; at the expiration of this period a portion of the chloroform will be found to have collected at the bottom of the vase; this should be separated and mixed with an additional part of glycerin, when no further separation will occur. This mixture may be kept for some time without any loss of chloroform by evaporation.—*Boston Journal of Chemistry*.

NITRITE OF AMYL IN SPASMODIC ASTHMA AND ACUTE BRONCHITIS (*American Journal of Insanity*, October, 1873).—Dr. Daniel H. Kitchen has employed nitrite of amyl with great success in the paroxysmal cough and dyspnœa of acute bronchitis, and in the suffocative attacks of spasmodic asthma. He gives it, by inhalation, in doses of from six to fifteen drops, poured into a small cup-sponge and applied immediately to the nose, the mouth being kept shut. He believes its beneficial effect to be due partly to its sedative action on the muscular system through the motor nerves, and partly to its power of diminishing blood-pressure and causing contraction of the capillaries. He details four cases, in all of which a variety of other remedies had been unsuccessfully tried, and in all of which nitrite of amyl gave prompt and entire relief.

DIAGNOSIS OF SEX OF THE FŒTUS, IN UTERO (*The Medical Record*, December 1, 1873).—Dr. Willis E. Ford concludes from an analysis of eighty cases that no indication of the sex of the child can be obtained from the pulsations of the fetal heart, and also that the position of the latter during the last-month of utero-gestation is no guide to the presentation. In the majority of cases he found the sex of the child to follow that of the older and more robust parent.

DEATH FROM CHLOROFORM (*British Medical Journal*).—A death from chloroform occurred at Hamilton, in the practice of Dr. Dickinson, in the case of a man to whom the anæsthetic had been administered in order to facilitate the reduction of an old-standing dislocation of the shoulder-joint. The deceased had been a hard drinker. Dr. Dickinson used the venous injection of ammonia without any result. It is reported in the *Australian Medical Journal*, August, 1873.

PHILADELPHIA
MEDICAL TIMES.
 A WEEKLY JOURNAL OF
 MEDICAL AND SURGICAL SCIENCE.

The Philadelphia Medical Times is an independent journal, devoted to no ends or interests whatever but those common to all who cultivate the science of medicine. Its columns are open to all those who wish to express their views on any subject coming within its legitimate sphere.

We invite contributions, reports of cases, notes and queries, medical news, and whatever may tend to increase the value of our pages.

All communications must bear the name of the sender (whether the name is to be published or not), and should be addressed to Editor Philadelphia Medical Times, care of the Publishers.

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SATURDAY, JANUARY 10, 1874.

EDITORIAL.

THE LYMPHATIC SYSTEM.

TO us, one of the most curious results of recent anatomical investigations is the great extension which has been given to the prescribed boundaries of the lymphatic system. Not many years since, this system was believed to be a well-defined group of large glands and minute ducts; but advancing knowledge has demonstrated that the Peyer's patches of the intestines form a portion of the system; that the spleen in function and in structure is so closely allied to the lymphatics as to give it a place among them; that scattered through the parenchyma of such glands as the liver are minute microscopic cell-clusters, or, possibly, even single cells, whose anatomical structure and physiological functions entitle them to a position among the lymphatics. Very recently, Neumann and his coadjutors and successors have exalted the marrow of the bones into a similar rank, and Recklinghausen, widening still further the borders of this ubiquitous anatomical system by his researches with the nitrate of silver staining, has, seemingly, established that the serous membranes are great lymphatic sacs. His statements have been confirmed by Ludwig, Schweigger-Seidel, Dybkowsky, Dogiel, and Böhn; and, according to the London *Lancet*, Dr. Klein, now of London, has just completed an elaborate memoir upon the serous sacs, which is to form a portion of a great work on the lymphatic system. In this he confirms the views of

Recklinghausen. The following account of this memoir is taken from the number of the London *Lancet* for December 13:

"The chief points of novelty and interest in Dr. Klein's treatise, which is enriched by ten plates containing many beautiful and original drawings, are, first, that the endothelium of the free surface of the omentum, centrum tendineum of the diaphragm, and pleura mediastini does not everywhere present the well-known flat, tessellated character; but that in many places there are groups of polyhedral, club-shaped, and even short columnar cells, with granular contents, ovoid nucleus, and bright nucleolus. This peculiar form of epithelium Dr. Klein terms 'germinating epithelium,' because numbers of spheroidal cells may be seen in the act of separating or actually detached, which in all respects resemble lymph-corpuscles. The lymph-cells thus lying free in the interior of the great serous sacs make their way into the lymphatic system through small openings distributed over the membrane, bounded by peculiar cells, which instantly call to mind the *stomata* of plants, and to which the same name has been given. In the female frog many of the cells present the peculiarity of being ciliated, and they have been observed to perform amœboid movements. In the next place, Dr. Klein describes the cellular elements of the *matrix* of the serous membranes. These he represents as forming tracts, patches, or nodules by the accumulation of more or less flattened and branched cells, each lying in a cavity of the matrix but little larger than itself; the cavities communicate by passages, and contain, besides the above-named cells, lymph-corpuscles; the whole corresponding to Recklinghausen's lymph canalicular system. These, being outside the true lymphatic vessels, though in close relation with their walls, he terms perilymphangial nodules and tracts. In some parts a still higher grade of organization is reached, the cells developing within lymphatic vessels, and the matrix becoming a reticulum, and containing numerous lymphoid corpuscles, so as to form a kind of adenoid tissue, as Dr. Sanderson has elsewhere described. Finally, in the highest form or stage of development, the nodules become vascularized, the matrix consisting of a reticulum of large branched cells, the spaces of which are filled with fluid or a limited number of lymphoid corpuscles. Both the last forms of tissue he terms endolymphangial tracts or nodules.

"Thus it is seen that just as in hydrocephalus the structure of the brain is unravelled by the accumulation of fluid, so in the serous membrane we have a lymphatic gland opened out to our view. In one part the free surface is found to be covered with germinating cells, which develop into lymphoid or white blood-corpuscles; in another are structures—the perilymphangial nodules—closely resembling the cortical portion of the ordinary lymphatic glands; and in yet another, the endolymphangial tracts and nodules are vascularized structures identical with the medullary portion of the lymphatic glands. In all, the production of lymphoid

corpuscles takes place actively; and the whole may therefore be regarded as ministering to the production and development of blood."

WE desire to call attention to the circular published under the heading of *Notes and Queries*. No words of ours can add force to its statements; and we therefore content ourselves with warmly commending its object to our readers.

CORRESPONDENCE.

TO THE EDITOR OF THE PHILADELPHIA MEDICAL TIMES:

IN the report of the Philadelphia County Medical Society in your issue of the 20th, the reporter quotes me incorrectly.

I not only saw smallpox in the "Neck," but also lost one case of the malignant type. In view of the surroundings, I was surprised at the paucity of cases occurring in that locality. So impressed was I by the probability of a rapid spread of the epidemic among these people, that I addressed a note to the Board of Health, urging their immediate attention to the disinfection of the contents of the wells before the conveyance of the "night-soil" to the truck farms.

In the hurry of my work I have been compelled to neglect my reading, and thus failed to notice this incorrect report.

Truly, etc.,

W. B. ATKINSON.

1400 PINE STREET, Dec. 27, 1873.

PROCEEDINGS OF SOCIETIES.

PHILADELPHIA COUNTY MEDICAL SOCIETY.

DR. W. B. ATKINSON, PRESIDENT, in the chair.

A CONVERSATIONAL meeting was held at the hall of the College of Physicians, Wednesday, November 26, 1873, at 8 o'clock P.M.

A CASE OF EXTRA-UTERINE PREGNANCY—THE CHILD DELIVERED BY GASTROTOMY.

Dr. WASHINGTON L. ATLEE narrated the following interesting case: He had visited Mrs. O'D., of Linwood, Delaware County, in consultation with Dr. Cardeza, November 19, 1873. She was 28 years of age. Menstruation had commenced at the age of 17, and nothing unusual had occurred with regard to this function before marriage, except that during an attack of anæmia it was suspended for about three months. She was married January 12, 1871, and in the month of August following she had a miscarriage in the third month, caused by over-exertion. During this pregnancy she had no nausea or other trouble, and afterwards enjoyed her usual good health.

December 14, 1872, she menstruated for the last time. This was followed by the middle of January, 1873, with great irritability of stomach. The nausea and vomiting were troublesome until the sixth month, after which they diminished somewhat. She ate but little, and

became much reduced. The abdomen gradually became fuller, and she first felt motion in the early part of May, 1873, which subsequently became so well marked that her husband noticed it. The breasts increased in size, the nipples and follicles enlarged, the areolæ deepened in color, and milk could be pressed out. These signs of pregnancy became more and more developed until the third week of September, when Dr. Cardeza was called on to visit her, and found her suffering with pain resembling that of labor. Upon examination, however, he found the neck of the uterus not obliterated,—in fact, very little different from the natural condition. Believing that she had made a mistake in her calculation, he gave an anodyne and left her. Soon after, all fetal movements ceased. Dr. Cardeza was again called on a fortnight afterwards, and the patient was again apparently in labor, there being also a colored discharge from the vagina. The uterus presenting the same conditions as before, he suspected an extra-uterine pregnancy. The discharge referred to commenced October 1, was of a pale-red color, continued about three weeks, then ceased, and again returned for two days, after which it did not recur.

When Dr. Atlee saw her on the 19th of November she was in a state of great emaciation and prostration, with a pulse exceedingly feeble, frequent, and small; tongue red; the stomach rejected everything; the face was pallid, and the eyes were sunken; the body threw off a cadaveric odor; and all the symptoms indicated a state of profound septicæmia.

The abdomen was larger, much more prominent, and narrower than that usual in a woman at full term. It was elastic, and distinctly fluctuating. When pressed suddenly with the finger-points so as to displace the fluid, solid masses could be struck within, and these masses could be put in motion as if submerged in a fluid. The uterus was *in situ*; the os and cervix were patulous, and admitted the index-finger fully one and a half inches. The sound entered three and a half inches, and after having been introduced about two inches appeared to encounter a brittle substance, through which it seemed to tear its way. In front of the uterus a bulging elastic mass could be felt occupying the superior strait.

After making this examination, Dr. Atlee confirmed the diagnosis of Dr. Cardeza. In palpating the abdominal wall, Dr. Atlee noticed that the hypogastric region was much more dense than any other portion, and from this circumstance inferred that this was the point of attachment of the placenta.

In order to afford immediate and temporary relief, the patient was tapped through the linea alba, and seven pints of fetid, purulent fluid were removed; afterwards the form of a child, lying transversely, was readily traceable through the relaxed walls of the abdomen.

The family were advised of the extreme condition of the patient, and that the only hope of life depended on the removal of the dead child; and, under present circumstances, that chance was extremely remote.

The patient having survived a few days, Dr. Atlee was sent for again, and visited her November 24 for the purpose of performing gastrotomy. On entering the house he was met by the exclamation, "Doctor, I fear you are too late; she is dying." Her pulse was over 140, and very feeble; the eyes were staring, the pupils dilated, the abdomen was tympanitic, the mind dull, and she seemed almost *in articulo mortis*.

After stimulating her with brandy, and administering an anæsthetic, an incision about five inches in length was made in the linea alba from the umbilicus downwards through the thin walls of the abdomen, and directly into the cyst enclosing the child. So soon as the latter was opened, there was a rush of very offensive gas, followed by an escape of dirty fluid, containing

portions of dead matter, and also a loop of the umbilical cord. The child was lying crosswise,—the head towards the left side, with the abdomen forward. The feet were seized and the child extracted. It was a female, and was full grown. The placenta, which was attached to the abdominal wall in the hypogastric region, was peeled off by the fingers. It was pretty strongly attached. The sac enclosing the child was decomposed, and, as it protected the viscera from the air and constituted a cavity in itself, it was not disturbed. After cleansing it out with sponges wet with Monsel's solution, the cavity was loosely tamponed with ribbons of muslin moistened by the same solution, and the opening was closed by four sutures, allowing the ends of the tampon to escape from the lower end of the wound.

It was almost a bloodless operation. The section through the abdominal wall was not unlike an incision through the same parts of a body recently deceased, and the separation of the placenta was unaccompanied by bleeding.

Dr. ATLEE was assisted by Drs. Cardeza of Claymont, Drysdale and W. Lemuel Atlee of Philadelphia, and Forward of Chester.

The patient sustained the operation better than was anticipated. She did not lose strength; her pulse rose to 152, but was not more feeble; her voice was stronger, and her mind was clearer.

Dr. ATLEE remarked that the history of this case was peculiar, inasmuch as there were no hypogastric, colicky pains, and no sanguinolent discharge, during the first half of the period of gestation.

Dr. WELCH asked the doctor what anæsthetic was used.

Dr. ATLEE, in reply to Dr. Welch, said that he had used his usual mixture of two parts by weight of ether and one part of chloroform.

Dr. STETLER asked whether the physician in attendance was aware at nine months of her true condition.

Dr. ATLEE answered that when Dr. Cardeza was first summoned, on making an examination he found the cervix uteri intact, and supposed that the patient had made a mistake in her calculation.

Dr. ESHLEMAN asked Dr. Atlee what other attachments there were besides that of the placenta to the abdominal wall.

Dr. ATLEE answered that the membranes were attached to the surrounding parts, and constituted the cyst which enclosed the child. They were allowed to remain. This plan was adopted in a case on which Dr. Atlee successfully operated several years ago,—a patient of Dr. Hinkle. (See his book on the "Diagnosis of Ovarian Tumors," p. 194.)

Dr. HAMILTON thought the case of Dr. Atlee a remarkable one, in that the patient survived the operation; and inquired as to the amount of hemorrhage.

Dr. ATLEE remarked that there seemed to be a check to the capillary circulation, as there was no bleeding. He could understand how, in such a poisoned condition of the blood, passive hemorrhage might occur, or, should reaction come on, how bleeding might follow. For this reason he had used the styptic tampon to guard against it. He had employed Monsel's solution, both as a hæmostatic and an antiseptic.

Dr. KERR asked if there was any hemorrhage after the removal of the placenta.

Dr. ATLEE said there was none.

Dr. O'HARA inquired of Dr. Atlee if there had been a discharge or any symptoms whatever at the third month of pregnancy, and what was the diagnostic value of those symptoms.

Dr. ATLEE, in reply, said there was in this case no sanguinolent discharge in the earlier period of pregnancy. When it did occur, it was due to the separation

of the membrana decidua at that time. An intra-uterine decidua is formed in extra-uterine pregnancy. In this case the exfoliation and extrusion of the decidua had not occurred during the nine months of gestation, as proved by the examination with the sound, and hence there was no bloody discharge during that period.

Dr. WILLIAM GOODELL had seen a very analogous case, in which he made two humiliating errors of diagnosis. It occurred in the practice of Dr. W. C. Perkins, who published an account of it (*Philadelphia Medical Times*, March, 1872, p. 223, and *American Journal of Obstetrics*, vol. v. p. 155).

In this case Dr. Goodell wished to deliver the woman by an incision through the posterior wall of the vagina, but was overruled by her friends. He therefore tapped the womb through the vagina, and drew off clear undecomposed liquor amnii, with great relief to the patient. But she was at that time very low from acute anæmia, and died three days after. At the autopsy a fully-developed child was found within a very large central cyst. When an extra-uterine pregnancy goes to term, he believed it to be always ventral, and never tubal. In tubal pregnancy the cyst ruptures early, and the woman usually perishes from hemorrhage. Whatever the seat of an extra-uterine foetation, a decidua membrane invariably forms. If this is cast off whole, as in his case, the physician is very likely to mistake it for the product of an abortion, and thus lose his bearings. It was the presence of this membrane which had obstructed the passage of Dr. Atlee's sound. Whenever the womb is drawn up by its attachment to the growing cyst, and the cervix is consequently found high above the symphysis, the resemblance to a retroverted gravid womb is so striking that many excellent observers have been deceived. The great danger in a delivery by gastrotomy is hemorrhage from the placental site, for the blood-vessels are not there, as in the womb, constricted by muscular tissue. In view of this danger, recent writers have advised that in ventral foetation the placenta should be left to become spontaneously detached, and that in the tubal the whole cyst should be removed *en masse*.

Dr. O'HARA asked Dr. Atlee what would be the proper time to interfere, providing extra-uterine foetation was recognized, and what interference was necessary in the different varieties.

Dr. ATLEE replied that the rule is for tubal pregnancies to result in rupture before the expiration of the third month, and death occurs from hemorrhage into the peritoneal cavity. In ovarian and ovaro-tubal pregnancies such an occurrence is unusual, unless from violence or accident. In case of rupture of the cyst of either a tubal or an ovarian pregnancy, the abdomen should be opened without delay, and the cavity cleared of all foreign contents.

Dr. LEE asked Dr. Atlee whether he would wait until full term if a ventral pregnancy were previously discovered.

Dr. ATLEE said that unless circumstances called for the operation of gastrotomy before, he would regard the approach to the full period of pregnancy as the proper time to interfere, where both mother and child might be saved.

Dr. ESHLEMAN inquired of Dr. Atlee whether, in removing the placenta from the abdominal wall, he did not have to contend with profuse hemorrhage, as there could be no such contraction as occurs in the uterus to close the bleeding sinuses.

Dr. ATLEE remarked that in his case there was no hemorrhage from the placenta, but under different circumstances this was to be expected. In all cases of gastrotomy for the removal of an extra-uterine foetus, he would recommend, where there was trouble from

bleeding, compression of the abdominal aorta until the bleeding was controlled by appropriate styptics. The doctor said he had heard nothing from the patient up to this time.

He has since received a letter from Dr. Cardeza, saying that "she gradually sank from pyæmic poisoning forty-six hours after the operation."

Dr. ESHLEMAN related a case of *concealed hemorrhage* in connection with detached placenta at seven and a half months' gestation. The lady, from no assignable cause, suddenly felt a very distressing pressure across the pit of the stomach, and observed a corresponding swelling arise. Upon attempting to use the chamber, a gush of bloody serum half filled the vessel. He found the neck taken up, and was able to press his finger within the os and touch the head, which was pressing firmly against it. The womb felt thick and spongy, as in placenta prævia, so that the question arose at the time whether such could be the case and the placenta have been thrust aside by the child's head under the unremitting pressure. No excessive hemorrhage continued. The mother, who had given birth to several children, insisted that she had no pains. This constant pressure, aided, perhaps, by ergot, slowly opened the os, ruptured the membranes, and in twenty hours from the first symptoms pressed the dead fœtus from the mother. The case, thus carefully watched and left to nature, was attended with no very unusual hemorrhage.

The child, before labor very active, ceased to move after the first hemorrhage. It was pale and shrivelled. The cuticle detached with pressure. The placenta was removed from the uterus, and found covered on its maternal surface with firm, dark, coagulated blood, and was rather soft in texture. Its removal was in the course of thirty seconds followed by a firm, dark-colored clot of blood the size of a child's head. The mother made a good recovery.

Dr. GOODELL expressed the opinion that this case was one of concealed accidental hemorrhage. In other words, the placenta had become centrally detached, and blood had escaped into the cup-like cavity thus formed. Some years ago, his attention had been directed to this subject by the loss of a patient from this cause. He then collected and reported over one hundred examples of this very fatal accident (*American Journal of Obstetrics*, vol. ii. p. 281). The graphic description of Dr. Eshleman's, that the child did not appear to be delivered by labor-pains, but "to be pushed slowly out like forced-meat of a sausage-machine," was typical of this kind of hemorrhage. The acute distention of the womb by the effused blood prevented anything like true labor-pains, but it, notwithstanding, developed a very powerful *vis a tergo*. The remedy here was early rupture of the membranes and a rapid delivery by version or by the forceps.

Dr. H. LEAMAN then read a paper on "Accidental Hemorrhage during Pregnancy."

Dr. ESHLEMAN asked Dr. Leaman whether there was any evidence of concealed hemorrhage occasioned by the tampon, as there is some difference of opinion as to its use.

Dr. LEAMAN said there were no evidences of concealed hemorrhage; the bleeding ceased entirely under the use of the tampon, and the patient reacted with the help of stimulants.

Dr. GOODELL said, in the case of frank accidental hemorrhage narrated by Dr. Leaman, that, while appreciating the very embarrassing position in which the doctor was placed, a position which disarmed all criticism, he yet thought it would perhaps have been the better plan to perforate the membranes. The bleeding area would thus have been materially contracted, with a probable arrest of the hemorrhage. In case of failure,

the forceps or version could afterwards be resorted to. He then related the history of a case of post-partum hemorrhage from a lacerated cervix, in which he had finally to tampon with a sponge saturated with Monsel's solution. A strip of the cervix hung down like a ribbon, and the bleeding was so free that he did not dare to remove the tampon before the lapse of forty-eight hours. The decomposition of the retained clots set up a slight attack of septicæmia, but the patient did well upon their removal.

Dr. O'HARA asked if there was serious hemorrhage to be feared in a case of lacerated perineum. He had never seen much loss in these cases, but had heard of a case in which the practitioner was undecided whether it was from the womb or laceration.

Dr. GOODELL said that hemorrhage from a ruptured perineum was sometimes very profuse. He had, in fact, been present at a forceps-delivery in which firm packing of the wound with styptics was needed. The immediate closure of the rupture with silver-wire sutures would have been the proper treatment, but neither he nor the attending physician had their pocket-cases with them. With regard to secondary operations, he had not thus far failed to get an excellent union of the parts. In primary operations he could recall but one failure, and that in a craniotomy case, in which, after the delivery of the head upon very powerful traction, the sudden release of the shoulders tore the perineum quite down to the sphincter ani. On the third day puerperal mania set in, and the patient, by repeatedly jumping out of bed, and by struggling to throw herself out of the window, tore out all the stitches he had put in.

Dr. ESHLEMAN said he had seen profuse hemorrhage from a moderate rupture, but found it ceased when the sutures were applied.

Dr. WELCH related a case which he said possessed other interesting features besides that of hemorrhage occurring previous to delivery. The case was as follows. He was called some years since, in consultation with Dr. Hinkle, to visit Mrs. L., aged 40 years, in labor at the seventh month of gestation. She had been pregnant seventeen times. Eleven children were born at term, and six miscarried. The patient was found suffering from uterine hemorrhage, which had continued for one month. The hemorrhage was not sudden, or gush-like, but of a slow, continual, draining character, which had reduced the patient to a pallid, feeble condition. By examination, Dr. Hinkle found the os tolerably well dilated, and the face of the child presenting, with the chin towards the symphysis. This presentation was readily converted into an occipital, and the forceps were applied; but on making traction they slipped off. It was then learned by digital examination that the child had been dead for a considerable length of time, and that decomposition had taken place to such an extent that the cranial bones had given way at their sutures under the pressure of the forceps. The decomposition was so marked that Dr. Welch was able to perform craniotomy with his index-finger; and, after extracting as many of the bones as possible, he succeeded in delivering the child by winding the scalp around his fingers, with little or no assistance by uterine contraction, although ergot had been freely administered. The placenta, which was found detached, was immediately delivered, but no contraction of the uterus followed. The blood continued to flow, now more profusely than before, and the patient by this time was without any perceptible pulse at the wrist, and was almost reduced to an exsanguineous state. Indeed, so feeble was she that she could only utter monosyllables in a whispering tone. Finding that ergot had failed to act, ice was next used: a small piece was carried well up into the cavity of the uterus, which also failed to produce contraction. Observing that the patient appeared un-

conscious of the presence of the ice in the cavity of the uterus, the question was asked, "Do you feel that?" She replied, with surprise, in a whispering tone, "Feel what?" It was evident that the ice was doing no good, and that it should no longer be relied upon. Vinegar was next used, and with a very decided result; for when the rag saturated with vinegar had just barely reached the cavity of the uterus, the patient shrieked with pain, the uterus contracted violently, the hemorrhage ceased, and a speedy recovery followed. The cause of the accidental hemorrhage was doubtless due to a partial detachment of the placenta, which the patient accounted for by a slight fall on the stairs a few days before the appearance of the bloody discharge. The most interesting feature in this case is not the accidental hemorrhage occurring before delivery, but the prompt and speedy arrest of the post-partum hemorrhage by the use of vinegar.

GLEANINGS FROM OUR EXCHANGES.

INCONTINENCE OF URINE AFTER LABOR (*British Medical Journal*, December 6, 1873).—Mr. Golding Bird reports the case of a woman, aged 32, who suffered from incontinence of urine as the result of a tedious and prolonged labor, in which forceps were applied. The escape of urine was constant; she was mentally depressed, and experienced much pain. The absence of any vaginal fistula was proved by injecting the bladder with colored water, none of which returned by the vagina. On examination per vaginam, there was found plastic effusion around the urethra, the base of the bladder, and lower part of the uterus, fixing the parts completely, so that the sphincter vesicæ was prevented from closing. The bladder was very irritable, much contracted, and could only contain an ounce of urine, and that with much distress. This condition was treated by injecting the viscus with one to two grains of morphia in about half an ounce of water, the operation being preceded by a slightly forcible injection of water to increase mechanically the capacity of the organ. After this was done, the water was allowed to flow, and the morphia, being injected, was retained as long as possible. The quantity used for distention depended on the distress produced: it was never carried beyond slight pain. By these means the bladder was enabled to hold first two, then three ounces; and, as the cellulosic deposit became absorbed and the power of the sphincter increased, she was able to hold fluid better, until in about three weeks she could voluntarily retain her urine for half an hour.

The thickening gradually passed off, and in six weeks—when she passed from under observation—the bladder could hold eight ounces.

ATROPIA IN PHTHISICAL SWEATING (*British Medical Journal*, November 29, 1873).—A notice in the *Philadelphia Medical Times* of last year, in which Dr. J. C. Wilson stated that he had successfully used sulphate of atropia in doses of one-eightieth of a grain for the relief of profuse sweating in four cases of phthisis, led Dr. Fräntzel to make an extended series of researches in the Charité Hospital in Berlin on the effect of atropia in such cases. In a paper on the subject published in *Virchow's Archiv*, vol. lxxviii. part i. (*Allgemeine Medicin. Central-Zeitung*, August 2), he states that, having given it to seventy-five cases, he has arrived at the conclusion that it is a remedy that he can confidently recommend not only in phthisical sweating, but also in that which attends other diseased conditions, such as acute articular rheumatism and convalescence from trichinosis. Among the seventy-five cases were fifteen

cases of more or less recent cheesy pneumonia, of whom all had more or less fever with night-sweats; forty-eight of distinct pulmonary phthisis, of whom forty-two had hectic; one of acute articular rheumatism with high fever; two of ulcerative endocarditis, and two of trichinosis. In the first fifteen patients the sweating was in six completely arrested, in seven much diminished, in two there was no change. In the forty-eight phthisical cases, the medicine had no effect in five, in twenty-one the sweating was remarkably abated, and in twenty-two it disappeared entirely. Several of the patients in whom the atropia failed were near death when it was given. In the eight cases of rheumatism the atropia gave permanent relief in five, in two it produced a marked diminution of the sweats, in one it was useless. In one of the cases of ulcerative endocarditis it proved useful; not so in the other. In the two cases of trichinosis the cessation of the acute stage of the disease, and of the hectic fever attending it, was followed without any rise of temperature by profuse night-sweats. Sulphate of atropia, in doses of a milligramme (.015 grain), was given two hours before the expected access of sweating daily for five days in succession in one case, and for three days in the other; the result being that the sweats entirely disappeared from the first evening when it was given. In one of the cases of rheumatism, in a man aged thirty-two, nearly all the large joints of the upper and lower limbs had been severely affected during five days; the patient was covered with sudamina, and, when seen by Dr. Fräntzel, was bathed in sweat. A milligramme of sulphate of atropia was given immediately, and very soon there was an abatement of the sweating, which in two hours disappeared. It returned in the night, but ceased the next forenoon after the administration of a similar dose. The atropia was thenceforth given regularly night and morning, with the effect of completely preventing the sweating. The fever lasted fourteen days. In another case of acute articular rheumatism, atropia was given first in doses of one, then of two milligrammes, with a similar result; and it is remarked that on two days in the course of the disease in which it was omitted, the sweating recurred. The atropia was given according to the following formula: sulphate of atropia, six milligrammes (9-100ths of a grain); extract of gentian, sufficient to make ten pills. Dr. Fräntzel has never given larger doses than 1.2 milligrammes (a little less than one-fiftieth of a grain), from fear of producing toxic symptoms. Even doses of 0.6 and 1.2 milligrammes, though unattended with any mischief, have produced slight symptoms of poisoning. In not a few cases after taking the medicine, the patient felt itching in the neck, which, however, disappeared in one or two hours. The pupils not unfrequently acted slowly, and were sometimes dilated. In some cases there were muscæ volitantes. The atropia had to be stopped in four cases on account of diarrhœa: that this was due to the medicine was proved by the fact that it ceased when the atropia was discontinued, and reappeared when it was resumed. What the physiological action of atropia is in arresting perspiration, Dr. Fräntzel says it is difficult to determine. He is, however, inclined to believe that the profuse sweats arise from relaxation of the walls of the vessels supplied to the sudoriferous glands; and he remarks that the researches of Meuriot, Fleming, Jones, Hayden, and Brown-Séquard have shown that atropia contracts the smallest vessels. To this are to be ascribed both the diminution of the sweats and the dryness of the mouth and skin observed in cases of poisoning with belladonna and with atropia.

SUPPRESSION OF URINE (*British Medical Journal*, November 22, 1873).—Mr. Albert Kisch reports the case of a female, æt. 47, who, when he first saw her, had not

passed urine for eleven days. There was nothing in her countenance or general aspect to arrest attention, but the tongue was exceedingly anæmic and slightly coated at the back, and there was a continual sense of nausea. She had vomited once on the preceding day. She had been subject to diarrhœa for some years, and to continual drowsiness, which often passed into sleep with heavy snoring; she had frequently suffered from aching in the back; the urine, which was never very copious, had been somewhat reduced for two months, and there had been some puffiness about the lower eyelids.

A catheter was passed, but not a drop of urine escaped. The bowels having been freely relieved by saline cathartics, she was then treated by dry cupping in the loins, fomentations of digitalis over the abdomen, and infusion of digitalis internally. She was placed on a diet of water and skimmed milk, *ad libitum*, with a little bread and beef-tea.

About noon on the following day she passed three drachms of very turbid urine, albuminous, crowded with blood-disks and epithelial cells from the genito-urinary tract, and exhibiting a few epithelial casts. Two hours later she passed urine freely; it was pale, clear, feebly albuminous, with a few casts, but free from blood-disks. Early in the next day she had a severe convulsive seizure, which was succeeded by others with varying frequency until her death, which occurred two days later. The case is interesting from the long and almost absolute suppression of urine without anasarca or other prominent symptoms, and from the occurrence of convulsions subsequent to the free passage of urine. The latter must have been the product of the excreting and not the secreting part of the kidneys, and was clearly nothing more than the *urina potius*, due to the copious liquid diet. No necropsy was permitted, but the kidneys were probably small and granular, and diseased to such a degree that the whole of the cortical and the greater part of the medullary portion had ceased to act.

HYPODERMIC INJECTIONS IN THE TREATMENT OF CHOLERA (*Indian Medical Gazette*, November 1, 1873).—Surgeon A. R. Hall believes that in the collapse of cholera the patient is not suffering from nervous exhaustion, but is being *suffocated* by spasmodic contraction of the muscular coats of the arteries, due to the same cause as the vomiting and purging,—a specific irritation of the medulla oblongata and sympathetic nerve. Proceeding on this theory, he has treated his last case of cholera by subcutaneous injections of chloral hydrate, which he asserts to be one of the most powerful cardiac sedatives we possess. The patient when first seen was in a state of collapse, had the regular choleraic voice, fingers blue and wrinkled, and pulse barely perceptible at the wrist, although the heart was beating strongly; there were frequent vomiting and purging, cold skin and breath, shrunken eyes, and cramps in the legs; he had not passed urine for several hours. One scruple of chloral was given by the mouth, but was immediately rejected. Five grains of chloral in solution in fifty minims of water were then injected under the skin of the arm. His hands and feet soon became warmer, and his radial pulse more perceptible. In about two hours vomiting and purging increased, and his hands grew colder; two and a half grains additional were injected, and two hours later the same quantity again. In a short time the vomiting subsided, the temperature rose, and he passed a small quantity of highly albuminous urine. He steadily improved, was well fed for a few days, and made a rapid recovery. Three other cases treated similarly by another practitioner all resulted equally favorably.

A correspondent of *Le Progrès Médical*, November 22, advocates the hypodermic injection of sulphuric ether and other stimulants in adynamic cases, and

mentions one in which the injection of from two to three grammes of pure ether was the means of bringing a patient through the algid stage of cholera after all other remedies had failed.

THE DETECTION OF STONE (*British Medical Journal*, December 6).—At a recent meeting of surgeons at the Medical Society, Mr. W. D. Napier described his instruments for the detection and removal of stone in the bladder. The diagnostic properties of the sound or "detector" invented by this gentleman depend on its beak being coated with lead, and on the soft and polished surface thus obtained becoming scratched by the slightest contact with any hard substance. If the calculus be small, or if fragments remain after crushing operations, recourse must now be had to the second instrument, which consists of an india-rubber tube, with expanded extremity, not unlike an ordinary convolvulus. Introduced in a folded condition through a species of catheter tipped with cacao-butter, the removal of the canula permits the full opening-out of the cup, which acts as a species of wing in retaining the instrument towards the neck of the bladder. The force of gravitation now inclines any foreign body to be drawn within the pliable and elastic walls, and the process of removal may be completed without any fear of injury to the mucous membrane from the sharp edges of fragments. Mr. Napier concluded by an interesting demonstration on a prepared bladder and urethra, and an animated discussion ensued, in which most of the surgeons present took part.

RUPTURE OF THE STOMACH (*British Medical Journal*, November 22, 1873).—Mr. H. Kirwan King was summoned hurriedly to his office, and found a man staggering about, unable to speak, but groaning with acute pain, and both hands pressed firmly into his stomach. He fell down in a state of collapse, and died in a few minutes.

At the post-mortem examination, two enormous clots were found on each side of the spine; and on the anterior surface of the pyloric pouch was an irregular aperture with edges infiltrated with black blood, and presenting appearances of ulceration. The upper portion of the duodenum was distended with clots. The liver was quite healthy; but a roundish gall-stone, about the size of a nut, was firmly impacted in the neck of the gall-bladder. The remaining viscera were quite healthy. The rupture was probably induced by the efforts made to relieve the pain of the gall-stone by violent pressure to the epigastrium; the coats of the stomach, being preternaturally weakened by ulceration, gave way, and the patient died from the shock.

ERGOT IN EPISTAXIS (*The Medical Record*, October 15, 1873).—Dr. Andrew H. Smith reports the case of a man, æt. 37, who suffered from persistent epistaxis, recurring sometimes two or three times a day. Direct and rhinoscopic examination showed no abnormal condition of the nasal mucous membrane. Astringents were applied locally by means of both the brush and syringe, and such general treatment was resorted to as the symptoms demanded. After this had been persevered in for two weeks without affecting the hemorrhages, the fluid extract of ergot was prescribed in twenty-drop doses three times a day.

This was continued for ten days, with the effect of entirely restraining the bleeding from the time the first dose was taken. The medicine was then omitted, but in a few days the bleeding began anew. It was immediately arrested by a resort to the drug, and did not afterwards return; the medicine being continued at gradually-increasing intervals for nearly a month.

INOCULATION OF SYPHILIS IN CIRCUMCISION (*New York Medical Journal*, December, 1873).—Dr. R. W.

Taylor, of New York, in an interesting communication "On the Question of the Transmission of Syphilitic Contagion in the Rite of Circumcision," considers this subject—which is one of importance to the Jews of our population—in a most thorough manner. Four cases of suspected syphilis, supposed to have been acquired in this way, are carefully analyzed, and the results presented.

The conclusions which Dr. Taylor arrives at upon this subject may be summed up briefly as follows: That in the Jewish rite of circumcision there is a possibility of syphilis being acquired; that the contagion is most likely to occur in the act of sucking the wound. Dr. Taylor recommends that the operation of sucking should be wholly abolished, and if a styptic solution of any kind is used it should be poured from a vessel on the wound rather than squirted upon it from the mouth of the operator.

MISCELLANY.

DISEASE-DESTROYING TREE.—M. Gimbert, who has been long engaged in collecting evidence concerning the Australian tree *Eucalyptus globulus*, the growth of which is surprisingly rapid, attaining besides gigantic dimensions, has addressed an interesting communication to the Academy of Sciences. This plant, it now appears, possesses an extraordinary power of destroying miasmatic influence in fever-stricken districts. It has the singular property of absorbing ten times its weight of water from the soil, and of emitting antiseptic camphorous effluvia. When sown in marshy ground it will dry it up in a very short time. The English were the first to try it at the Cape, and within two or three years they completely changed the climatic condition of the unhealthy parts of the colony. A few years later its plantation was undertaken on a large scale in various parts of Algeria. At Pardock, twenty miles from Algiers, a farm situated on the banks of the Hamyze was noted for its extremely pestilential air. In the spring of 1867 about thirteen thousand of the eucalyptus were planted there. In July of the same year—the time when the fever season used to set in—not a single case occurred; yet the trees were not more than nine feet high. Since then complete immunity from fever has been maintained. In the neighborhood of Constantine the farm of Ben Machydlin was equally in bad repute. It was covered with marshes both in winter and in summer. In five years the whole ground was dried up by fourteen thousand of these trees, and farmers and children enjoy excellent health. At the factory of the Gue de Constantine, in three years a plantation of eucalyptus has transformed twelve acres of marshy soil into a magnificent park, whence fever has completely disappeared. In the island of Cuba this and all other paludal diseases are fast disappearing from all the unhealthy districts where this tree has been introduced. A station-house at one of the ends of a railway-viaduct in the Department of the Var was so pestilential that the officials could not be kept there longer than a year. Forty of these trees were planted, and it is now as healthy as any other place on the line. We have no information as to whether this beneficent

tree will grow in other than hot climates. We hope that experiments will be made to determine this point. It would be a good thing to introduce it on the West Coast of Africa.—*Times and Gazette*, Nov. 1, 1873.

A MAN advertises for a competent person to undertake the sale of a new patent medicine, and adds that "it will prove highly lucrative to the undertaker."

NOTES AND QUERIES.

TO THE MEDICAL PROFESSION AT LARGE.

IN obedience to the resolution of the Convention of Physicians, lately assembled in this city, we undertake this address to your sympathy, with full assurance that its hallowed object will secure your cordial support.

But yesterday our community was as a house of mourning, and its wail of distress, arising from stricken hearts and desolate homes, smote the ear of the world with the horrors of our affliction. Those of our people who remained in the doomed city can only appreciate the sad story of suffering seen and felt in our midst, when death thus held, for seven long weeks, its high carnival among us. Over the entire city death and silence brooded. Its deserted streets, alike both day and night, scarce echoed a sound save the mournful horse-rattle as it hurried to the grave its load of dead, or the footfalls of those ministers of mercy who lighted up the hours of darkness with their visits of charity. Silently and continually the pious labor of love was performed, and each rivalled the other in the patient discharge of a common humanity. When the shaft of death prostrated one, another with true Corsican spirit took his place, and the work of benevolence went fearlessly on, until under the favor of Heaven the disease was baffled and the reign of terror at an end. Each creed, sect, order, and brotherhood had its heroes and its martyrs, and it is in commemoration of the deeds of both the living and the dead that our hearts should never suffer forgetfulness.

The faithful physician who survived the storm bears in his conscience its plaudits of duty done; but our seven brothers, Williams, Freeman, Crone, Hatch, Kennon, Blount, and Minor, fallen at their post, martyrs to the cause of humanity, ay, bright exemplars of professional honor and duty, sleep in their quiet graves, with more lasting glory than embalmed warriors in piles of storied marble. Our fallen brothers, if they could be consulted, would doubtless wish no fitter burial than quiet interment in leafy Elmwood, but professional pride demands the honor of their perpetual commemoration, and we ask in this behalf that suitable stone be raised and carved for them. Their fame, the story of their heroism, belongs to the medical world, and our brethren throughout the broad land are respectfully requested to contribute something to this laudable end. Your contributions, however small, will aggregate a success of the enterprise.

Remittances may be made to either member of the Committee.

RICHARD H. TAYLOR, M.D., 44 North Court Street.

F. L. SIM, M.D., 115½ Beale Street.

R. W. MITCHELL, M.D., 275 Main Street.

MEMPHIS, TENN., November 10, 1873.

PHILADELPHIA COUNTY MEDICAL SOCIETY.

Dr. J. Solis Cohen will read a paper before the Society, Wednesday, January 14, at 8 o'clock P.M., on "Croup in its Relations to Tracheotomy." All regular practitioners of medicine in the city are invited.

THE letter from "Fizzie" has been received. The editor of the *Philadelphia Medical Times* is always obliged for any hints or suggestions as to the management of the journal, but would certainly be more affected by the advice if the author had had the backbone to sign his name.

OFFICIAL LIST

OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U.S. ARMY, FROM DECEMBER 30, 1873, TO JANUARY 5, 1874, INCLUSIVE.

ABADIE, J. H., SURGEON.—Granted leave of absence for four months, on Surgeon's Certificate of Disability. S. O. 1, A.G.O., January 2, 1874.

SATURDAY, JANUARY 17, 1874.

ORIGINAL LECTURES.

CLINICAL LECTURE

ON TWO CASES IN WHICH CEREBRAL SYMPTOMS WERE PRODUCED BY THE USE OF WHITE LEAD AS A COSMETIC.

Delivered December 17, 1873,

BY JAMES H. HUTCHINSON, M.D.,

One of the Attending Physicians to the Pennsylvania Hospital.

AT my last clinic I brought before you a patient who had been poisoned by using white lead as a cosmetic, and referred briefly to another patient in my wards in whom I believed certain symptoms, at that time of little severity, were due to the same cause. The latter has since died, presenting, before her death, well-marked cerebral symptoms; and I propose, therefore, to occupy a part of the hour this morning with some remarks on the graver forms of lead-poisoning, so well illustrated by these two cases.

Case I.—E. R., æt. 21, born in England, single, and of irregular habits, was admitted into the women's medical ward of the Pennsylvania Hospital, November 18, 1873. The following history was obtained from the patient shortly after her admission. The patient is free from any known hereditary taint. Her mother is subject to attacks of hæmoptysis, but her father and several brothers and sisters are in good health. She states that when sixteen years of age she contracted a chancre, which was followed in due time by a cutaneous eruption, probably roseola, by sore throat, and by ulcers on the outer and lower third of both thighs and in both popliteal spaces. She was laid up with these for eighteen months, and during that period suffered from amenorrhœa and profound anæmia. During last winter she had an attack of subacute rheumatism, accompanied by swelling of the joints, and last summer was taken with spitting of blood, for which she was admitted into the hospital by my colleague Dr. John F. Meigs. She appears to have been at that time anæmic, and to have suffered from dysmenorrhœa and obstinate constipation, but during her stay here had no hemorrhage from the lungs. She tells us that her bowels are often not moved for several days in succession, and that she occasionally has colicky pains in the abdomen. It is found, on questioning her, that she has been in the habit of applying a powder to her face as a cosmetic. For some time past she has been an almost constant sufferer from frontal headache. Three or four weeks ago she observed that her eyes were drawn inwardly, and that her eyesight was growing dim. She has had marked dizziness and double vision. She has never had a convulsion, and has never lost consciousness.

On admission, the patient is extremely weak, very anæmic, and when she talks or moves hand or foot muscular tremblings are observed. The right pupil is larger than the left, the latter being about normal in size. There is marked dimness of vision, and internal strabismus on both sides; there is no paralysis of any other of the muscles of the eye than the external rectus,

and none of any of the muscles of the face. The grip of the left hand is feebler than that of the right, and she thinks that there is some loss of power in the left leg, although this is not very evident. Sensation is unimpaired. She complains of pain in the forehead and in the vertex, and occasionally in the lower occipital region. A well-marked blue line is seen on the gums just above the insertion of the teeth. The tongue is pale, the appetite poor, the stomach occasionally irritable, and the bowels continue costive; the chest is healthy; the menses are regular. When the patient rises or turns in bed she becomes giddy, and in consequence she is unable to stand without assistance. The veins of the forehead are turgid with blood. An ophthalmoscopic examination shows the existence of marked optic neuritis in both eyes. The urine is acid and is loaded with urates, but contains no lead, no sugar, and no albumen. It has a specific gravity of 1020. She was ordered ten grains of the iodide of potassium three times daily.

A little of the powder which she had been in the habit of applying to her face was obtained from her and analyzed by Mr. Hecker, the apothecary of the hospital, who found it to be pure white lead.

November 28.—The patient had an attack of vomiting last night, during which she threw up a large quantity of a greenish liquid. This morning she is pale and much prostrated; there is general muscular soreness and slight fever, and some pain in the hepatic region. Pulse 100. R Potassæ citratis, gr. x; Tr. opii deodoratæ, gtt. iii, q. t. h. The iodide of potassium to be suspended for the present.

November 29.—Better again.

November 30.—Slightly delirious last night. The frontal headache persists, but is not so intense as formerly. The fever-mixture ordered on the 28th to be stopped; the iodide to be renewed.

December 1.—Delusions and emotional disturbances to-day: for instance, the patient asserts that she was forced to sleep in the stable last night. A sixteenth of a grain of the bichloride of mercury was added to each dose of the iodide.

December 3.—Is much better to-day, and is able to be out of bed and to walk a little.

December 8.—The improvement noted on the 3d continues. The muscular tremblings are less decided. The frontal headache is less severe, and now only troublesome at night. The dizziness has almost entirely disappeared, and the squint, although still present, is scarcely noticeable. Temperature, A.M., 97½°; P.M., 98°.

December 9.—Temperature, A.M., 97°; P.M., 98°. Basham's mixture, in tablespoonful doses, to be repeated every three hours, was ordered to-day. She has been taking six grains of quinia daily since the 6th.

An ophthalmoscopic examination showed the continuance of optic neuritis, the inflammation involving a narrow zone of the retina immediately surrounding the disk. In the right eye the remainder of the retina was quite healthy. In the left eye the inflammatory changes had extended towards, and to a slight extent involved, the macula. A number of small, brightly reflecting spots were seen arranged in rows, producing an appearance which has been compared by Soelberg Wells to that presented by a cluster of spider's eggs.

Case II.—M. C., æt. 23, native of Ireland, a copyist by occupation, was admitted into the women's medical ward of the Pennsylvania Hospital, December 2, 1873. The patient is of healthy parentage, and states that she has herself always had good health until two months ago, when she began to suffer from headache, general weakness, and loss of appetite. She did not, however, take to her bed until two weeks before her admission,

*The notes of this and the following case were taken by my clinical clerk, Dr. George S. Gerhard.

when she was seized with violent gastric pain, nausea, and vomiting, her bowels being confined. She continued to suffer from such attacks until she sought relief in the hospital.

On admission, the patient presents a very anæmic appearance. The conjunctivæ are slightly yellowish, her tongue is furred, and her bowels are constipated, although not obstinately so. There is a faint but well-defined blue line on the gums, and it is found, on questioning her, that she has been in the habit for years past of applying a cosmetic powder to her face. A box of powder which she has with her is found on examination to be composed of inert substances, but she says that she has not always bought the same powder, and she may, therefore, have occasionally used one containing lead. There is a good deal of general muscular soreness, but no evidence of loss of power in any part of the body. The urine is acid, has a specific gravity of 1020, and contains neither albumen nor any other abnormal constituents.

December 3.—The patient had a violent paroxysm of gastric pain last night, accompanied by nausea and vomiting. She was ordered ten grains of iodide of potassium three times a day.

December 6.—In spite of the patient's denial that she had ever used lead knowingly, we find through one of her friends that she has been in the habit, for some time past, of mixing white lead with water and applying it to her neck and shoulders.

December 9.—There is some improvement in her condition to-day; the vomiting taking place generally only early in the morning, immediately after rising, and very rarely after eating. She has little or no pain at present in the region of the stomach. She complains, however, of pain in the inter-scapular region, and along the course of the musculo-spiral and radial nerves of both sides. There is no tendency to wrist-drop, and none to colic. The bowels are moved daily.

December 11.—The patient is to take, hereafter, five grains of citrate of iron with each dose of the potassium. She has very much improved in appearance; the conjunctivæ are less yellow.

December 13.—An epileptiform convulsion occurred last night at 10.15 o'clock, lasting, it is said, about five minutes, but it was not timed by the clock. During this convulsion the patient foamed at the mouth and moved both her hands and her feet, but one side was more convulsed than the other. She had a second convulsion half an hour later, a third at 3 A.M., and a fourth at 7 A.M., all of them being of the same character as the first, and lasting about the same length of time. She was apparently unconscious both during and for a short time after the attacks. This morning she is very restless, and is constantly crying out. She is entirely free from fever and flushing of the face. Her pulse is 98. Her pupils are of equal size, somewhat dilated, but contract under a bright light. Her tongue is moist. A turpentine injection was ordered, and cold affusion to the head. The iodide of potassium to be continued.

December 14.—Another convulsion occurred yesterday afternoon at 2 o'clock, since which time the patient has been so restless and so noisy that it was necessary to tie her in bed and to place her in a room by herself. This morning she has some heat of skin, and a dry and somewhat brownish tongue. Her pulse is 80. The right pupil is larger than the left. Neither pupil responds very promptly to the light. She frequently cries out, and complains of pain at the nape of the neck, which is slightly rigid. The head is somewhat retracted. She is able to swallow milk and beef-tea, which have been freely administered to her since yesterday, and have been retained. The bowels were moved yesterday by the turpentine injection. A hypodermic injection of a twelfth of a grain of sulphate of morphia

last night, followed by a two-grain opium suppository, failed to induce sleep.

An ophthalmoscopic examination of the right eye, made by Dr. W. F. Norris, shows the presence of optic neuritis in a marked degree. The patient's sister, who was seen to-day, states that she (the patient) has never complained of dimness of vision or of vertigo, and, excepting queer muscular movements when she was excited, and infrequent attacks of headache during the last half-year, she always appeared to be quite well until the beginning of the troubles for which she was admitted. The sister has a specimen of the preparation which the patient has been applying to her neck and face, but says it is useless to examine it, for it was bought for white lead and was so marked by the apothecary who sold it.

December 15.—The patient had a convulsion at 7 o'clock last evening, and another three hours later, during which she died.

It is said that while in the last two convulsions she moved her arms freely, but her lower extremities appeared to be paralyzed.

Autopsy, thirteen hours after death. The body was well nourished. Rigor mortis pronounced. Hypostatic congestion of dependent portions of the body unusually well marked. The calvarium was rather thick, but free from any disease. The veins and sinuses of the dura mater were turgid with a very fluid and dark-colored blood. The cerebral membranes were perfectly healthy. The brain, which was carefully examined at my request by my colleague Dr. Hunt, was exceedingly anæmic, the gray matter presenting rather a yellowish appearance, but there was no evidence of disease of any kind. The spinal veins were also engorged, and there was a marked increase in the amount of spinal fluid. The thoracic and abdominal viscera were all examined and found to be congested, but otherwise were in a normal condition, except the ovaries, in which cystic degeneration had commenced.

The posterior part of both the eyeballs was removed and sent to Dr. Norris for minute examination. Some prominence of the optic disks could be detected by the unassisted eye.

Since the autopsy, the following hurried note has been received from Dr. Norris with reference to his ophthalmoscopic examination: "The right eye of M. C. was very similar in appearance to that figured by Mr. J. Hutchinson (see *Ophthalmic Hospital Reports*, February, 1871) in Fig. 1: viz., outlines hazy; color bluish white and opaque; sclerotic ring not visible; vessels very much diminished in calibre; no choroid changes."

I will now read the notes of a third case, in which the symptoms of lead-poisoning are less severe, but in which it has been caused in the same way.

Case III.—M. K., æt. 18, born in America, an umbrella-maker by occupation, was admitted into the medical ward of the Pennsylvania Hospital, October 7, 1873. She is free from any hereditary taint, and until the beginning of her present trouble always had good health. About four weeks before admission she observed that her hands trembled when raised, and soon afterwards that she was unable to extend them fully. She states that for six months previous to the appearance of these symptoms she had been in the habit of applying a preparation to her face as a cosmetic, "to take the shine off the skin," which, upon examination, was found to consist mainly of carbonate of lead. She has not suffered from colic, but her bowels have been at times constipated.

On admission, the patient has well-marked wrist-drop,

especially on the right side, and the characteristic blue line of lead-poisoning is observed on the margins of the gums. The extensor muscles of the forearm respond feebly to the faradaic and galvanic currents. The deltoid and biceps of the right side are weaker than the corresponding muscles of the left side. She is anæmic and weak. Her appetite is poor. Her bowels are regularly moved. The urine is normal, and does not contain lead. She was ordered ten grains of iodide of potassium, and a mixture composed of gentian and iron, three times daily, together with galvanization of the affected muscles.

November 1.—Patient improving. Has now slight control over the extensors of the wrist.

November 24.—The extensors continue to grow stronger. The muscles have been faradized daily for some time past, and contract better than they did. The blue line on the gums is now very indistinct.

November 27.—Although the wrist-drop, especially on the right side, is not yet overcome, the patient is now able to use the right hand in writing. Her general condition has also very much improved. In addition to the internal use of iodide of potassium, the fortieth of a grain of sulphate of strychnia is now injected daily over the muscles of the forearm.

I have nothing to say this morning in reference to the third case; the patient has already been before you and formed the subject of a clinical lecture by my colleague Dr. J. F. Meigs, and I would not have brought her down again into the amphitheatre were it not that the lead-poisoning was produced in the three cases in precisely the same way,—*i.e.*, by the use of white lead as a cosmetic. In every instance it had been used for some time before it produced any bad effects,—in the case of E. R. for two years. It is possible, of course, that until very recently it was not absorbed by the skin; it is more probable, I think, that she has been poisoning herself by a slow process, until thorough saturation of the system has at last taken place. Cerebral symptoms, if I may judge from the writings of English and American physicians, are not very frequently met with as the consequence of lead-poisoning either in this country or in Great Britain; they seem to occur with great frequency in France and Germany. Before the two cases the history of which I have just read came under my observation, I had seen but one other case, which was only a short time under my care before it ended fatally, and of which I have preserved no notes. I remember, however, that the patient had epileptic convulsions, and that he was violently delirious; in fact, his delirium was so violent that he had to be restrained. At the time he was under my care the ophthalmoscope was not in general use as an aid in the diagnosis of cerebral disease, and the condition of his eyes was of course not noted either before or after death.

The diagnosis of the first of my cases presented some points of difficulty. The distinct history which we were able to obtain of a syphilitic infection, and of the secondaries which followed this infection, led me at first to the conclusion that the nervous symptoms were dependent upon a specific lesion of the brain,—most probably meningitis,—causing paralysis of the external recti muscles, and that the same diathesis was the cause of the optic neuritis. A closer study of the case has convinced

me that I was wrong. In the first place, the patient does not present a single symptom which lead is not capable of producing, while there are some absent which we should have at least expected in syphilitic disease. Shortly after her admission into our wards her temperature was noted and found to be normal; at least such is the recollection of the nurse, for, unfortunately, the record has been lost. It is most likely that her memory does not mislead her, for had there been any increase we should have continued to use the thermometer. Later in the case the temperature was again observed, and again found normal; and this time, as you have learned from the notes, the observation was recorded. In meningitis, no matter how slight, fever is an almost constant attendant, while on the other hand the gravest cerebral symptoms due to the absorption of lead are not of necessity accompanied by any elevation of the temperature. The delirium, too, which was present on more than one occasion is much more likely to have been caused by the lead than by syphilis; and the same may be said of the muscular tremors. Optic neuritis may, and occasionally does, occur in syphilitic persons, but Mr. Hutchinson and others have shown that it is not infrequently met with in those who work in lead. The only symptom which it was difficult to explain on the supposition that the patient was affected with lead-poisoning was the palsy of the external recti; but the effects of lead manifest themselves in loss of power of other muscles than the extensors of the wrist, and I see no reason why the external recti should not sometimes be the sufferers. In fact, I have recently been told that Mr. Hutchinson has reported cases in which he shows that this has occurred. I need not add that we have other symptoms than those I have been just pointing out which indicate unmistakably the presence of lead-poisoning. The patient denied at first having used lead as a cosmetic, but after the white lead had been found in her pocket she confessed that she had bought it to apply to her face, and had been applying it for at least two years. We have a well-marked blue line on the gums, which still persists, in spite of the treatment by iodide of potassium; and we have a tendency to constipation, which is disappearing under the remedies employed.

The second case is even more interesting than the first. When I saw the patient for the first time she appeared to be suffering from a disease of the stomach, either ulcer or gastralgia; but the discovery of the blue line on the gums the next day satisfied me that I had to do with a case of lead-poisoning. You have heard that she denied having ever knowingly used any preparation containing lead as a cosmetic, but her friends and her sisters were more candid; and there can, therefore, be no doubt that she not only made such a use of white lead, but that she also applied it very freely to the surface of the upper part of her body. For a few days she seemed to do well under the treatment adopted. The paroxysms of pain became rarer and less severe, the vomiting occurred less frequently, generally in the morning, and only occasionally after eating, and she apparently gained

strength. The anæmia, notwithstanding the administration of iron, remained, however, as marked as ever, and the same was true of the muscular soreness.

I was unprepared for the grave change in her condition which I found at my morning visit to the hospital on the 13th. Although fully aware that the symptoms then present might be due to the lead-poisoning, I confess that I had some difficulty in regarding them as anything else than the manifestation of hysteria, to which they unquestionably bore a decided resemblance. It was difficult to look upon them as expressions of serious cerebral trouble, because there was neither heat of surface nor acceleration of the pulse,—which does not of course exclude lead-poisoning,—and because she had given on one or two occasions some evidence that she was of an hysterical temperament. The character of the convulsions appeared, however, to be distinctly epileptiform, with loss of consciousness and foaming at the mouth. In addition to the iodide of potassium, which I directed should be continued, her treatment consisted of a turpentine injection, and cold affusions to the head. Later in the day the resident found it necessary to administer hypodermically a quarter of a grain of morphia and an opium suppository, in order to quiet the excessive restlessness. I saw the patient again the next morning, and learned that she had had another convulsion similar in character to those that preceded it. Her symptoms also indicated that her condition was a more serious one than it had seemed to me the day before. Her pulse was much weaker, and her tongue was heavily furred with a thick whitish coating. She also complained of pain in the nucha, and there was some slight retraction of the head; but I was then, and am still, inclined to believe that she opposed some resistance to my attempt to bend her head forwards. If any doubt had been left as to the serious nature of the case, it would have been dispelled by the results of the ophthalmoscopic examination, which showed the presence of optic neuritis,—a disease which, I repeat, it is now well known occurs as a consequence of lead-poisoning, and the existence of which was fully proven at the post-mortem examination. The results of the autopsy were in other respects confirmatory of the correctness of the view I held. No lesion of the solids of the body was detected which could reasonably be supposed capable of causing death. Congestion of several of the organs, and engorgement of the meningeal vessels both spinal and cerebral, were found, it is true, but these I am disposed to look upon as consequences of the fluid condition to which the blood had been reduced by the prolonged action of lead. In order that the examination of the brain might be made by one who had no preconceived opinion to maintain as to the nature of the disease, I requested my colleague Dr. Hunt to make it. Having done so, he pronounced the brain to be perfectly healthy in all respects, save, of course, that it was anæmic and that there was discoloration of the gray matter,—a condition which is said by Valleix* to be not infre-

quently met with in the brains of those who die of lead-poisoning. With the object of leaving nothing undone that may throw light on this interesting case, I have sent portions of the brain, liver, and kidney to Dr. H. B. Hare, the pathological chemist to the hospital, in order that they may be examined for lead; and I will report to you at some future time the result of his investigation. The effusion which was found beneath the spinal membranes probably took place not long before death, since during the last convulsion the legs were not moved, which was not the case during the previous convulsions; and there was no loss of power observed at the morning visit.

The three cases are further of interest because they illustrate the fact that the same poison may and does frequently produce very different effects in different people. You are aware how various are the forms which constitutional syphilis is capable of assuming; and the same is true to a certain extent of lead-poisoning. The girl with wrist-drop has been under observation for more than three months, and during that time has never suffered from constipation or colic, and has at no time presented evidences of nervous derangement. But the same cause has lighted up in the two other cases a train of cerebral symptoms which has terminated in one case in death, and in the other will certainly leave behind it a decided impairment of vision. The sudden and unexpected supervention of delirium and convulsions upon colic and constipation, which occurred in the former, has, of course, been observed before. It took place in the case which was under my care some years ago, giving rise to the impression that the patient had been drinking, and leading to his arrest.

The cerebral symptoms in lead-poisoning may assume various forms. In some instances the progress of the disease is slow, and the periods of delirium may alternate with intervals of entire consciousness. This was seen in our first patient, who could be said to have been "out of her head" only on two or three occasions. This is not a dangerous form, and generally ends in recovery. In others, as in the case of M. C., convulsions occur with great frequency, and are followed by delirium or coma. In still another form, coma is the only indication of grave trouble. Of all these forms, the convulsive is said to be the most serious.†

The ophthalmoscopic examinations were, I need not say, of great service to us in arriving at a correct conclusion in the first case, and in the second they placed beyond doubt the existence of more than a merely hysterical condition. In making them I have had the advantage of the assistance of Drs. George C. Harlan and W. F. Norris, both of Wills Ophthalmic Hospital. The occurrence of amaurosis in lead-poisoning had not escaped the observation of our predecessors in the healing art, but before the introduction of the ophthalmoscope

† Cerebral symptoms dependent upon lead-poisoning are well described by the following authors: Valleix, *loc. cit.*; Th. and A. Husemann, *Handbuch der Toxicologie*; Jaccoud, *Clinique Médicale*; Stille, *Therapeutics and Materia Medica*; Tanquerel; Brockmann, *Die metallurgischen Krankheiten des Oberharnes*; Wunderlich, *Pathologie*.

* *Guide du Médecin Praticien*, vol. v.

it was impossible to say whether this depended upon simply a loss of the power of accommodation or upon optic neuritis. We are now in a position to make this distinction; and this is a gain of no little importance, inasmuch as the existence of the latter may be assumed to indicate that the system is more fully under the effects of lead than when the former alone is detected. We are, moreover, not to limit our examination to those cases in which complaint is made of a defect of vision, for the inflammation may produce marked changes within the interior of the eye without the patient or her friends being aware of its presence, as in the case of M. C., who always when questioned on the subject answered that she saw perfectly.*

Pathologists have of course explained in different ways the mode in which lead-poisoning gives rise to cerebral symptoms. By some it is thought that they are due to the direct irritation of the lead, but to me it appears much more probable that they are largely owing to the anæmic condition of the nervous centres which is generally present, and which certainly did exist in a marked degree in the fatal case reported by me, in which there was scarcely a symptom present which could not be referred to this cause, and in which there was, judging from the remarkably fluid condition of the blood after death, a deficiency of fibrin as well as of the blood-corpuscles.

It still remains for me to speak of the treatment. In the first case, the use of the iodide of potassium in large doses, combined latterly with iron, has been of decided benefit to the patient. You recollect the condition in which she was first brought before you, carried upon a stretcher; to-day she is able to walk down-stairs unassisted. The internal squint has gone, and she has gained strength and flesh. Unfortunately, I cannot add that the optic neuritis has subsided; it is apparently beyond the influence of remedies. The small quantity of bichloride of mercury which was added to the iodide not long after her admission was prescribed under the idea that there might still be lurking in her system some vestige of the syphilitic poison. The patient has also been taking quinia, and has, I think, been benefited by it.

The same remedies were employed in the second case, and were apparently doing good, when, without warning, a convulsion occurred. Is it possible that any other treatment than that adopted would have saved the patient's life? I think not. Certainly not bleeding or any other depletory measure, for this would have aggravated the anæmia, which was, I believe, the exciting as well as the predisposing cause of the convulsions. These did not seem to be prolonged enough or sufficiently numerous to make it justifiable to have recourse to the inhalation of chloroform; and if a similar case were to present itself to me to-morrow I should treat it in the same way.

I have but a word to add in conclusion, and that is to call your attention to the fact that, in a ward which contains generally about twenty patients, I have had at one time as many as three presenting

symptoms produced by the use of white lead as a cosmetic; and I have good reason to believe that it is sold in large quantities by druggists who know the purpose for which it is bought, although they may be ignorant of the disastrous consequences its use entails. You have had sufficient evidence to-day that its application to the face is far from being harmless; and perhaps some of you may have the power, by making this generally known, to prevent some poor woman from falling a victim to her vanity.

ORIGINAL COMMUNICATIONS.

CURIOSITIES OF COUGH.

Reported to the Medical Library and Journal Association, December 12, 1873.

BY L. ELSBERG, M.D.,

Professor of Laryngoscopy and Diseases of the Throat in the University of New York.

IF, as is often said, the medical specialist be in danger, on account of the limits of his practice, of becoming one-sided and prejudiced, he enjoys as a corrective the advantage of seeing, more frequently than general practitioners, rare and difficult cases, which teach him the relation and inter-connection of diseases of different organs, and of local and general affections. Some years ago, in an essay which I had the honor of reading before this association, I pointed out some curious instances of the connection of throat-diseases with various other derangements of health; this evening I desire to call your attention to some cases of unusual cough which have fallen under my observation during the last twelve months.

I have seen three cases of what I cannot better characterize than as a "dog-cough."

I.—J. S. B., a healthy-looking boy, born and brought up in the country, æt. 15 years, reported to have had some trouble in his throat for several years, came to my office about a year ago, making at irregular intervals a loud barking noise, not distinguishable from the barking of a large ordinary dog. The intervals of quiet lasted from only a few minutes to half an hour. His mother said that this peculiar cough had existed for three or four months, and that previously he had had an ordinary cough for a couple of years, which gradually developed into this bark. He had continually been under medical treatment, with, however, only occasional and temporary benefit; the bark had never been influenced by any medicine, but had become worse—*i.e.*, more frequent—during the last few weeks. The boy's general health seemed unaffected; his respiration, appetite, digestion, evacuations, sleep, etc., were normal; he sometimes, though not frequently, barked during the night, but this did not always awaken him. I found enlarged tonsils, some pharyngitis, and localized inflammation of the upper aperture of the larynx,—*i.e.*, of the free border of the epiglottis, the ary-epiglottic folds, the mucous membrane covering the cartilages of Santorini, and the upper portion of the arytenoid cartilages; just around the upper laryngeal aperture there struck me as being a circumscribed, livid discoloration.

The other two cases resembled this one in the peculiarity of the loud, dog-bark cough; the anatomico-pathological condition, however, was differ-

* Since this lecture was delivered, Dr. Norris has examined sections of the optic nerve, and tells me there is abundant evidence of the existence of inflammation under the microscope.

ent. In neither were the tonsils enlarged or pharyngitis present, but in both the epiglottis and the immediate neighborhood of the entrance into the larynx were more or less affected. In one, a little boy of ten years, there was principally inflammation and swelling of the ary-epiglottic folds; and in the other, a young lady of nineteen, there were, in addition, superficial ulcers like pins' heads on the upper edge of the epiglottis, especially at the angle of junction of the ary-epiglottic folds.

In all three cases the character of the cough was so marked that persons who heard it without knowing its source mistook it again and again for the barking of a dog. I would add that the barking was like the healthy dog-voice; I have known more than once dogs to be suffering from a cough resembling in sound an ordinary human cough, but what these three patients had sounded just like the ordinary dog-bark. All three were cured by local treatment, in conjunction with attention to the general health.

II.—February 14, 1873, Mrs. E. M., of New Haven, æt. 31 years; has generally enjoyed good health until three months ago. Since then, she suffers from frequent paroxysms, consisting of a peculiar hacking cough, combined with retching and straining positively distressing to listen to. The cough itself is indescribable; she does not vomit, but strains so hard as to make one sick to witness it. This continues until she coughs up a little phlegm and matter. She also complains of some pain on the left side, just back of the larynx. On laryngoscopic examination, I found that the left pyriform sinus contained some purulent matter and something dark, and discovered at the bottom two ulcers. When I announced what I saw to the patient, she turned to her husband and said, "There, didn't I always tell you so?" She then told me what she had purposely omitted to relate before,—viz., that her trouble commenced after swallowing some black thread which she had bitten off in sewing, three or four months previously. It remained there ever since, in spite of the terrible attacks of coughing and retching to get it up; but was now easily removed. She had taken all sorts of medicine without benefit; the whole fauces and pharynx were sore and inflamed from the straining and tearing; sometimes she would get up phlegm streaked with blood from the violent efforts. She was exceedingly nervous, and the general health was affected both by her disease and the medicine she had taken.

More than ten years ago I communicated to the Academy of Medicine some observations on diseases of the pyriform sinus, and among them the following case of follicular ulceration:

Louis D., a native of Germany, aged 17 years, working as a tinsmith, after exposure a year and a half before I saw him "caught a severe cold and cough." He had taken all sorts of cough-mixtures, domestic and from doctors, regular and irregular; had been to the German Dispensary, the College of Physicians and Surgeons, etc., etc. Since six weeks the cough had become *truly terrible*,—a ceaseless hacking night and day. When the lad came to me he presented the obvious signs of a rapid consumption; he was extremely weak and emaciated, with a pulse varying from 120 to 130, hectic flush on cheeks, and cold extremities. He could obtain but little sleep, and had also night-sweats; but over-weighing all else was the cough,—constant, irritating, hacking, severe beyond description."*

Since then I have repeatedly found a cough of the utmost severity depend upon disease of the pyriform sinus.

(To be continued.)

MYELOGENIC LEUKÆMIA.

BY H. C. HAND, M.D.

BEING more than ordinarily interested in researches on the development of the blood in the red marrow of bones,—having, indeed, myself published some observations on the subject (*Philadelphia Medical Times*, vol. ii. p. 164),—I was greatly pleased to meet the translation by William Ashbridge, M.D., in the *Times*, vol. iv. p. 102. In the case of Professor F. Mosler, there detailed, we have both the *ante-* and *post-mortem* history of a patient with myelogenic leukæmia.

I desire to call attention to the history of a case which has already been published in the *Northwestern Medical and Surgical Journal* in a series of cases of organic heart-disease, but which possesses far greater interest in this connection.

Bridget McGuire, æt. 70; single; temperate; native of Ireland; in giving her family history states that her mother died of old age, her father, at the age of sixty years, of dropsy with cough, and that one sister died at sixty, after but one week's illness, of hæmoptysis, spitting a great deal of clotted blood every day from her seizure to death. The patient came from Ireland in 1809, since which time she has earned her living by light sewing and lace-weaving, always being careful to preserve good health. She has been delicate from girlhood, and has suffered from palpitation of the heart. When forty-four years old she had some affection of the lungs, which confined her to bed two months. From this she recovered her usual health, and retained it for a number of years.

At the age of fifty-one she was treated by Dr. Mitchell for *heart-disease*, having had quite profuse hæmoptysis, caused by heavy lifting, and suffering from debility, palpitation, and a violent pain in the region of the heart, with tenderness on pressure. Recovery took place from this attack, but she was left subject to occasional exacerbations of a similar character. At the age of fifty-eight her feet swelled; after three weeks the swelling subsided; but from that time onwards she has often had a slight effusion of serum in the feet and legs.

About Christmas, 1869, she commenced to be short of breath, and to suffer greatly from eructations, both day and night, of clear, tasteless water.

October 10, 1870, she was admitted to the Philadelphia Hospital, complaining of dyspnoea, slight, dry cough, a "sore pain at heart," and œdema of the feet.

October 14.—Note made that the expression of the face is intelligent, but anxious. The position assumed is a sitting one in the bed, the recumbent position being impossible. Her complexion is sallow; the lips and extremities bluish; the conjunctivæ dingy. The muscular and adipose tissues are not greatly wasted. The skin is soft and flexible, but cool. The feet and legs are œdematous. She occasionally has slight dizziness; never any headache. The sight and hearing are good. Sleep for the last two months has been impossible in the recumbent posture, and disturbed by smothering sensations even when sitting up. The tongue is of a

Organs under Sight. Transactions of the New York Academy of Medicine, vol. ii. part xii. p. 436.

* See Essay on the Topical Medication of the Larynx and Neighboring

purplish hue. The appetite very poor, and a gripping pain is felt in the course of the œsophagus during deglutition. Abdomen tympanitic. Neither spleen nor liver enlarged. Bowels inclined to constipation.

She has some cough, but no expectoration; says that four years ago she had a severe stitch in the upper side of the chest, the doctor attending calling it pleurisy. The right clavicle is excessively prominent; the percussion-note under it is dull, the respiration harsh. Left side, anteriorly, percussion clear, respiratory murmur feeble, expiration prolonged. Posteriorly, the right side of the chest is much more prominent than the left, while its percussion-note is unduly resonant, and respiration feeble. The left side is dull on percussion; respiration bronchial, with bronchial resonance of voice. Submucous and subcrepitant râles are heard in all parts of the chest.

Heart, no pain at present; impulse normal; movements regular. Its space of dullness extends from the third intercostal space to the base of chest, and from the left edge of the sternum two inches outwards. There is no murmur. Pulse 100, feeble. The veins at the base of the neck are engorged, and pulsate. There is no pain nor tenderness about the kidneys. Urine, specific gravity 1016; no albumen; normal in color and quantity. No pain nor swelling of joints.

October 18.—In the morning she appeared nearly as well as usual, sitting up in bed, but looking somewhat exhausted, and complaining of pain in the legs and a sense of distress about the heart. Very soon after, she died by syncope.

Autopsy twenty-four hours after death.

Sternum.—First and second pieces movable on each other, as are also the third and fourth. Thick, bloody pus exudes when the periosteum is punctured near the movable portions. The cancellated tissue is softened so that the anterior and posterior compact layers can be approximated by pressure.

Lungs.—There are pleuritic adhesions on each side, confining a considerable quantity of straw-colored serum at right apex, at each base, and smaller quantities elsewhere over posterior lobes; the whole amount in each pleural cavity is about one pint.

The pulmonary tissue is emphysematous, except that at the base of the lungs where bathed by the pleuritic effusion, which is dark-colored, it has the appearance of flesh, and sinks readily in water. The whole of both posterior lobes, in fact, floats very low in water, is congested and firm. The bronchial tubes of congested portions contain muco-pus.

Pericardium.—Some old flakes of lymph on cardiac portion.

Heart.—Weight twelve and a half ounces. Cavities enlarged; walls firm, and of nearly normal thickness; valves all water-tight except the tricuspid, which leaks a little. Slight atheroma about the attachments of aortic valves. Right side of heart full of liquid blood, and some soft, dark clots. Left side empty. The blood in the veins is liquid.

Microscopical Characters.—The muscular fibres of the walls of the left ventricle are in an advanced stage of fatty degeneration, being filled with granules soluble in ether, and the striæ of many of the fibres being nearly obliterated. The fibres of the walls of the right ventricle are for the most part free from granules, having only small patches scattered here and there; the striæ are distinctly visible.

The Peritoneal Cavity contains one pint of straw-colored serum.

Liver.—Weight thirty-nine ounces. It is gorged with liquid blood, and is finely mottled with red and yellow. There is a broad (two and a half inches) depression on the upper surface of the right lobe, running from behind forward; the capsule covering this portion is

white, and thickened; a dilated branch of the portal vein (three lines in diameter) runs just beneath. The hepatic tissue contains one or two calcareous nodules the size of a cherry-stone.

Spleen.—Weight twelve ounces; firm; trabeculae prominent on section; capsule thickened, and covered by small flakes of lymph.

Kidneys.—Left, about normal size. Right, weight three and a quarter ounces; its capsule thickened and adherent so as to tear off some renal tissue when removed, leaving the surface rough and granular, and exposing small cysts. Section, dark in color; the cortical portion is scarcely a line deep.

Here, then, was a patient who, as I distinctly recollect her, was suffering with general debility, a feeble circulation, and profound anæmia; and at the post-mortem examination of her body a substance resembling pus oozed out from the cancellated tissue of the sternum. If on one hand it is to be regretted that no examination was made of the marrow of other bones, and no microscopical examination of the blood or of the puruloid liquid from the sternum, on the other hand there is the advantage that the notes were taken (October, 1870) before Neumann's researches had attracted any attention, and consequently at a time when there was no theory to be upheld. The anæmia seen to exist during life and the liquidity of the blood found after death justify the conclusion that the patient was in a leucocythæmic condition. The absence of those lesions of the spleen, liver, and lymphatic glands which usually accompany leucocythæmia, and the unmistakably abnormal character of the marrow of the sternum, together give strong evidence that to a vice of her blood-making marrow she owed the condition of her blood.

Nor is this the only case in which I have seen a like condition exist, although it is the only one of which I have notes. At autopsies of anæmic and emaciated subjects in the dead-room of the Philadelphia Hospital I have not infrequently (I would certainly be within bounds should I say six times) seen the same purulent liquid issue from the broken sternum. More than almost any other condition I have ever seen in the cadaver, it has puzzled me to explain. Not even when studying the changes occurring in the marrow, preparatory to the publication of the article already mentioned, did the condition of the sternum and the general condition of those patients become associated in my mind. Never, in fact, until reading the translation of the report of Professor Mosler's case, did the full solution of the problem fall upon me.

ST. PAUL, MINN., December 6, 1873.

HYPOGASTRIC LITHOTOMY (*The Lancet*, December 6, 1873).—Supra-pubic lithotomy has, in certain cases, a decided advantage over the lateral operation. Mr. Sampson Gamgee reports the case of a little girl, æt. 9, pale, puny, and with a very narrow pelvic outlet, who had long suffered from the presence of a large calculus in her bladder. The size and fixity of the stone, together with the smallness of the outlet, induced him to operate by the hypogastric method. The calculus was extracted, and the wound healed directly. There was no constitutional disturbance, and the patient was discharged, cured, on the fourteenth day.

NOTES OF HOSPITAL PRACTICE.

BELLEVUE HOSPITAL, NEW YORK.

SURGICAL CLINIC OF PROF. JAMES R. WOOD.

LIGATION OF THE FEMORAL ARTERY FOR POPLITEAL ANEURISM.

RICHARD C. (colored), æt. 35; male; U. S.; cook; admitted December 15, 1873. The patient gives a good family history; has rarely been ill himself. He has had gonorrhœa several times, however, and has had sores on his penis, but no secondary symptoms. He has been a hard drinker for years. Nine years ago he had an aneurism of the right popliteal artery. Pressure was tried in vain. The femoral artery was then ligated in Scarpa's space, and the patient made a complete recovery, the ligature coming away on the thirteenth day.

Two years ago the patient noticed a pulsation in the left popliteal space. This continued for six months; and then a tumor appeared of the size of a walnut, which gave him neither pain nor inconvenience. He went about his work, paying no attention to the doctors, who told him he had an aneurism. Meantime the tumor increased in size, and about seven months ago it began to give him pain and to swell. The swelling soon extended from the knee to the ankle. The pain and swelling would disappear after the leg had been bathed, rubbed, and bandaged, while the original tumor and pulsation remained undiminished. Still the patient kept at work until two months ago, when the pain and swelling had become so great that he was obliged to go to bed. The swelling increased, and the skin which covered it became so tense that he feared it would burst. At this juncture he was admitted to the hospital. On admission, the patient is a strong, healthy-looking man. He is suffering considerable pain, and can sleep but little in consequence. The left foot, leg, and lower third of the thigh are markedly œdematous, and the integuments are tense and shining. A tumor is found occupying the whole popliteal space and the lower third of the inner side of the thigh. Distinct pulsation can be seen as well as felt in this tumor. The pulsation is expansive, and synchronous with the radial pulse. No thrill can be felt, but a murmur, synchronous with the radial pulse, is heard over the whole surface of the tumor, loudest at the lower portion of the popliteal space. A blowing sound is heard also over the femoral artery above the situation of the tumor. When pressure is made on the artery above the tumor the pulsation and murmur cease, but the size of the tumor remains unaltered. On removing the pressure the pulsation and bruit return.

On making deep pressure over the artery, just above the tumor, the artery may be felt rolling under the finger like a somewhat stiff tube. The following are some of the measurements of the lower extremities:

	Right. Inches.	Left. Inches.
Thigh just above the tumor	14 $\frac{3}{8}$	19
Thigh midway between the knee and the upper limit of the tumor	13 $\frac{1}{2}$	22 $\frac{1}{2}$
Leg over tubercle of the tibia and lower portion of popliteal space	12	20 $\frac{3}{8}$
Knee over middle of patella and middle of popliteal space	14 $\frac{1}{4}$	24 $\frac{1}{2}$
Calf, upper portion	12 $\frac{1}{4}$	18 $\frac{1}{2}$
" middle "	12 $\frac{3}{8}$	17 $\frac{1}{4}$
" lower "	9	15
Ankle	7 $\frac{1}{2}$	11
Around point of heel and across instep	12 $\frac{3}{8}$	15 $\frac{1}{4}$
Around arch of foot and across instep	10	12 $\frac{1}{2}$

On the day of admission the whole limb was wrapped in cotton batting, and eight pounds six and one-half ounces of shot were placed over the femoral artery. A tourniquet was also buckled loosely around the thigh, to provide against accident.

December 16, A.M.—Bowels have moved four times since admission. Patient slept but little during the night.

December 17, A.M.,	pulse 104;	resp. 22;	temp. 99°
P.M.,	" 112	" 22	" 100 $\frac{1}{2}$ °
" 18, A.M.,	" 100	" 20	" 99°
P.M.,	" 108	" 27	" 100°
" 19, A.M.,	" 120	" 28	" 100 $\frac{1}{2}$ °

Patient has quite a brisk diarrhœa. Ordered bismuth. subnit., gr. x, after each passage.

December 19, P.M.,	pulse 116;	resp. 29;	temp. 101 $\frac{1}{2}$ °
" 20, A.M.,	" 112	" 24	" 99 $\frac{1}{2}$ °

Patient slept well last night; has no diarrhœa.

A consultation was held at noon of the above date, and ligation of the femoral artery was decided on. Professor Wood did the operation in the presence of the class. The artery was exposed without difficulty, and ligated four and one-half inches from Poupart's ligament. The edges of the wound were brought together by means of wire sutures, reinforced with adhesive straps. The whole limb was enveloped in cotton batting. Evidences of incipient aneurism of the arch of the aorta, as well as of fatty degeneration of the heart, had been discovered before the operation, and for these reasons the patient took no anæsthetic. He bore the operation, which lasted ten minutes, without flinching.

"At the consultation," said Professor Wood, "the question was of course between ligation of the femoral artery and amputation of the thigh. In the operation we have performed, the dangers to be apprehended are principally three: first, secondary hemorrhage at the time of the separation of the ligature; second, gangrene of the leg from inadequacy of the collateral circulation; third, sloughing of the sac.

"With regard to the first danger, the atheromatous condition of the artery renders it by no means insignificant; but it would have been no less, and not more easily overcome, had we amputated.

"With regard to the danger of gangrene of the leg, I think it is small; for the growth of the aneurism has been sufficiently slow to admit of the establishment of a collateral supply of blood to the parts below it, amply sufficient for their nourishment. Sloughing of the sac I consider to be the chief danger. In that event we should not wish we had amputated, for the patient might yet recover without amputation. More likely, however, we should be obliged to amputate. I have amputated in such a case with success. With such good prospects for success in this case, I consider ligation far less hazardous than amputation. Should the leg die or the sac slough, we still have left two-thirds of the thigh sound, and we may amputate then with almost as good chances of success as now. I believe we have given the man the best chance possible of saving his life as well as his limb."

After-History of the Case.—December 20, 1873, 3 P.M.—Patient has some pain in the tumor, and in the thigh and leg. Ordered McMunn's Elixir, ℥ xl. 4 P.M., pulse 116; respiration 30; temperature 98 $\frac{1}{2}$ °.

December 21, 9 A.M.—Pulse 124; respiration 30; temperature 102 $\frac{1}{2}$ °. Patient feels much more comfortable, but still has some pain in the knee. 8 P.M.—Pulse 120; respiration 24; temperature 101 $\frac{1}{2}$ °. Patient has not slept since the operation. Ordered McMunn, ℥ xxx. Midnight.—Patient still awake. Ordered McMunn, ℥ xx.

December 22, A.M.,	pulse 114;	resp. 24;	temp. 101°
P.M.,	" 124	" 25	" 102°

December 23, A.M., pulse 114; resp. 25; temp. 101°
Slight discharge of pus from the wound.

December 23, P.M., pulse 114; resp. 24; temp. 101°
" 24, A.M., " 108 " 23 " 100°

Patient has no pain; appetite excellent; bowels slightly constipated; some flatus; ordered enema of assafetida. The integuments covering the tumor, leg, and foot are becoming wrinkled.

Measurements.

	Inches.
Thigh just above the tumor	19½
Midway between knee and most superior portion of the tumor	23
Over tubercle of tibia and most inferior portion of popliteal space	17½
Knee over middle of patella and middle of popliteal space	24½
Calf, upper portion	17½
" middle "	17½
" lower "	14½
Ankle	11
Around point of heel and across the instep	14½
Around arch of foot and across the instep	12½

December 24, P.M.—Pulse 112; respiration 32; temperature 100½°.

December 25, A.M.—Pulse 112; respiration 30; temperature 100½°. Small amount of pus is discovered in the wound, and one suture is removed; otherwise patient is doing well.

December 25, P.M., pulse 120; resp. 20; temp. 100½°
" 26, A.M., " 116 " 30 " 100½°
" P.M., " 120 " 26 " 100½°
" 27, A.M., " 124 " 28 " 100°

Patient is comfortable; has no pain, and sleeps better than at any time since the operation. Appetite good.

December 27, P.M., pulse 116; resp. 28; temp. 101½°
" 28, A.M., " 116 " 22 " 98½°

Patient slept well last night. This morning he is very comfortable. The integument over the tumor is wrinkling more and more every day. Tumor gradually decreasing in size. There is still some pulsation in it—not expansile.

1.30 P.M.—Patient while at dinner felt something give way at site of the ligature. On looking down, he saw blood coming from the wound. The house-surgeon was immediately called, but before he arrived patient lost eight ounces of blood. The artery was controlled by digital compression under Poupart's ligament, and by Petit's tourniquet. Patient did not suffer much from shock, but was greatly frightened. Prolabia became pale, and surface cool. Pulse remained quite good. Patient was thirsty; ordered whisky and carbonate of ammonia, also opiates, to keep him quiet. Hot bottles were placed about him.

4 P.M.—Pulse 120; respiration 24; temperature 99½°. Patient is still suffering from fright, but is in good condition.

December 29, 1 A.M.—Involuntary contractions of the quadriceps extensor are noticed. During one of these a hemorrhage happens, patient losing two ounces of blood. Tourniquet is readjusted.

9 A.M.—Pulse 120; respiration 31; temperature 101½°. Patient has been seen every hour during the night, and has not slept at all; still apprehensive of danger. Prolabia pale. Temperature of foot and leg normal.

4 P.M.—Pulse 140; respiration 28; temperature 104°. Patient comfortable.

9.30 P.M.—Surface-temperature high to the touch. Pulse full and rapid. Respiration short and quick. Patient complains of some pain in the epigastrium; is very thirsty. Ordered ice, also tincture of aconite (Fleming's), ℥ i every hour until four doses are taken. The

artery has been controlled by digital compression and tourniquet combined, ever since the first hemorrhage occurred, on the 28th inst.

December 30, 1 A.M.—Patient has not rested well to-night. He feels hungry, and takes ℥ ii of beef-tea. Pulse quite rapid. Surface very warm. Patient suffers no pain.

2 A.M.—Patient has some pain in the leg, and great thirst; otherwise is about the same as at last note. Ordered ice, and McMunn, ℥ xxx. Pulsations in the artery are as strong as ever; they are still controlled by digital compression above the tourniquet.

3.30 A.M.—Patient is sound asleep. Respirations sighing. Pulse still rapid, and skin hot. No change in the character of the pulsations of the artery. Patient awoke once after the last note, but relapsed into a somnolent state.

4 A.M.—Patient more comfortable. Skin not so hot. Pulse less rapid. Temperature of leg good. Patient sleeps most of the time, and has subsultus tendinum.

5 A.M.—Compression still kept up by finger and tourniquet.

9.15 A.M.—Pulse 140; respiration 30; temperature 105°. Patient has slept most of the time since the last note. He feels refreshed; is hungry; takes beef-tea. Temperature of leg still good. Digital and tourniquet pressure still kept up.

12.30 P.M.—Small amount of sero-sanguinolent pus, of fetid odor, noticed in the wound. Dupuytren's tourniquet substituted for Petit's. Artery entirely controlled by it, but digital compression still kept up.

4 P.M.—Pulse 150; respiration 28; temperature 104°.

9.30 P.M.—Pulse rapid and feeble. Ordered tincture of aconite (Fleming's), ℥ ii every hour for three hours.

December 31, 1 A.M.—Pulse 140. Skin cooler. Patient is slightly delirious. Subsultus tendinum. Ordered quin. sulph., gr. v, q. t. h., and ℥ xxx of McMunn's Elixir.

5 A.M.—Patient has grown weaker since last note. Pulse has gradually lost force, and is now very rapid and feeble. Pulsations in external iliac at times cannot be felt. Respirations sighing. Patient is flighty, though easily recalled to himself. Temperature of the leg good. Foot a little cold. Tumor somewhat softer, and skin covering it quite wrinkled.

9 A.M.—Pulse 144; respiration 24; temperature 102°. Patient has slept since last note. He wakes now, and is refreshed; still a little flighty; says he feels well. Pulse fuller, and respirations normal.

1 P.M.—Patient hungry, and eating chicken-soup and oysters. He takes beef-tea and porter through the day.

4 P.M.—Pulse 144; respiration 28; temperature 104°.

9.30 P.M.—Patient has had some nausea, and has vomited. Ordered bismuth. subnit., gr. x; cum cerii oxal., gr. i, to be repeated if nausea should recur. Ordered also milk-punch (milk ℥ ss with whisky ℥ i) every half-hour.

January 1, 12.05 A.M.—Patient awake. Pulse rapid and feeble. Respirations normal. Patient has some abdominal tympanitis. Ordered turpentine stupes. Has not slept for some hours. Ordered McMunn's Elixir, ℥ xxx. Has vomited two or three times since last note. Ordered bismuth and cerium, as above, after each emesis.

2 A.M.—Patient developed tracheal râles rapidly in the last half-hour, and died.

Autopsy.—January 1, 1874, 2 P.M.—All the organs anæmic. Liver and kidneys slightly fatty.

Heart and Arterial System.—At the base of the aortic valves were some atheromatous changes. On the ascending part of the arch of the aorta, just above the aortic valves, was a large patch of atheroma. All the arteries were atheromatous, the left femoral more so than the right.

The recent ligature had ulcerated partly through the artery. Above the ligature a clot of considerable firmness had formed, three-quarters of an inch in length, tapering to a point above, and filling the calibre of the vessel at the seat of ligature. Below the ligature was a clot one inch in length, less firm than the clot above, and not filling the calibre of the vessel perfectly at any point.

The aneurismal sac was firmly adherent to the bone and to the surrounding soft parts; so that, in order to remove it for examination, and to preserve it, the lower half of the femur and the upper half of the tibia were sawn off together.

The sac, as well as the leg and foot, showed no signs of sloughing. The cavity of the sac would admit a man's fist; it was lined with layers of fibrin, and in the centre were clots of blood and fibrin.

The other side of the body presented objects of greater interest. Here the femoral artery had been tied in Scarpa's space, nine years before, by Dr. Gurdon Buck, for popliteal aneurism. The artery was found to be impervious above the seat of ligature, as far as the origin of the profunda femoris, a distance of two and three-quarter inches. Below the seat of ligature the artery was impervious for a distance of two and one-quarter inches. It then became pervious, and remained so for a distance of five and one-half inches. At a point one and one-half inches above the sac it became again impervious. The sac had dwindled to a fibrous cord, two and one-half inches in length, but little larger than the artery itself, and terminating at the bifurcation of the artery. Below the bifurcation the posterior tibial was impervious as far as the peroneal, a distance of one inch; the anterior tibial was impervious as far as the recurrent branch, a distance of three-quarters of an inch.

F. W. CHAPIN, M.D.

TRANSLATIONS.

THE THEORY OF FATTY HEART.

DR. H. CURSCHMANN, of Berlin, makes (*Deutsches Archiv für Klin. Med.*) the following observations regarding a case of fatty heart which was under his care in February, 1870, at which time he was assistant physician in one of the hospitals of Mayence. The patient was a man aged 32 years, by profession a waiter, and, during the course of the affection which terminated in his death, at various times came under treatment, both in the wards of the hospital and also as an out-patient. His first admission into the hospital was in February, 1870. His previous health, up to 1868, had always been good. His parents were both living, and in good health. From his fourteenth year he had been a waiter, and during the last five years he had been in various hotels along the Rhine, and had been compelled to labor very actively. He had not been addicted at any period of his life to the excessive use of spirituous liquors, but, like all his class, had been very irregular in regard to his meals. He had never had syphilis, and had not indulged to excess in sexual intercourse. For two years he had noticed that his strength was failing, that he grew tired upon slight exertion, and suffered from shortness of breath from going up-stairs; but he still continued at his work until compelled by a severe cough, attributed by him to exposure to cold, and an increase of his above-mentioned sufferings, to seek the hospital. At the time of his admission, February 8, 1870, he complained of great weakness, frequent attacks of palpitation of the heart, and a con-

stant shortness of breath, which at times increased in severity to a marked extent. His cough was frequent and troublesome, but accompanied with slight expectoration. He was compelled by his dyspnoea to maintain a half-sitting posture; his cheeks and lips were livid, a moderate amount of anasarca was present over his trunk and arms, while his lower extremities were markedly œdematous.

Auscultation of the lungs revealed a catarrh extending even to the finer bronchial tubes. The impulse of the heart could not be distinctly felt through the thoracic walls, and the area of percussive dullness over that organ was found much increased. The amount of urine secreted was small, and of high specific gravity. Under the use of the infusion of digitalis the symptoms ameliorated, the pulse became fuller, the anasarca diminished, and both the subjective and objective symptoms of the catarrh of the lungs disappeared. The condition of the heart remained about the same: the impulse was weak and indistinct; the sound feeble, but no murmur could at any time be made out. The man was sufficiently well on the 28th of the month to be discharged, at his own earnest desire.

From the 2d to the 17th of May he was in the hospital for treatment for a surgical affection, still suffering from shortness of breath and some palpitation, but had been able to work since his discharge, and did not complain in regard to his general health.

An examination of the heart gave the same result as on previous occasions; the pulse was small and soft, and, in a state of rest, scarcely 60.

On the 2d of June he again presented himself at the hospital, in a much worse condition than at the time of his previous admission. The symptoms were essentially the same as those of the previous attack, but more intense in character. The urine was scanty, and contained albumen; but after the use of digitalis the normal amount was secreted, and the albumen no longer appeared.

On the 4th of July the patient, much improved, was sent to his home in the Thuringian Forest, in the hope that he would there make more rapid progress towards convalescence.

On the 19th of September he came direct from his home to the hospital, and was again admitted, in a much worse condition than at his previous sojourn.

On the 5th of October, in spite of repeated prohibition, he rose from his bed and went to the closet, where he suddenly fell dead.

At the autopsy the body was found œdematous, the skin livid. Upon opening the skull, the meninges were found filled with blood, the brain-substance strikingly light in hue and œdematous, and the ventricles somewhat enlarged and filled with a clear fluid.

The pericardial sac was not changed, and the contained fluid was of normal quantity and character. The circumference of the muscular substance of the heart was quite double its normal size; the increase of the ventricles being proportional. The ventricles, as well as the auricles, were distended with fresh, dark blood. From the right ventricle the clots extended into the pulmonary artery, completely filling it and its larger branches. The walls of the cavities of the heart were thinned: the thickness of the wall of the left ventricle was one centimetre, that of the right half as much, and in some places but one-third of a centimetre. The muscular tissue in almost every portion was of a reddish-yellow color, at some places quite yellow, very relaxed, and quite readily torn. These changes were more advanced in the right than in the left ventricle. The papillary muscles were long and thin, and when cut across showed yellow streaks. The valves of the heart were unchanged, of normal thickness, and capable of perfect closure. A microscopic examination showed that the

muscles had undergone fatty degeneration, and that the striæ of the fibres were indistinct and had in some places vanished. The aorta and its larger branches, so far as examined, were unchanged.

In the kidneys, beginning fatty degeneration was found. The diagnosis of dilated heart with fatty degeneration was made at the time of the patient's first visit to the hospital. The fact of the dilatation was established by physical exploration; and the feeble pulse, and absence of impulse in conjunction with an organ increased in size, manifested a diminution of power. The question whether the diminished frequency of pulse is of pathognomonic value, as asserted by English authorities, is not discussed. No cause sufficient to account for the disease of the heart was discovered at the post-mortem examination. No valvular affection of the heart was present, nor was there anything that could interfere with the course of either the greater or the lesser circulation. The supposition that was made during life, that the changes in the liver and kidneys were secondary in their character, was also supported by the autopsy. The first change that took place in the heart was an excentric hypertrophy, affecting both sides, followed by fatty degeneration and consecutive thinning of the muscular walls of the heart. This conclusion would have been warranted by the anatomical conditions found at the examination, even if accurate and continued observation during life had been wanting, for it would not be possible that so great a dilatation could take place in a heart of normal size. It would be possible only in a heart which was already increased in size and then underwent dilatation. In answering the query as to the cause of original excentric hypertrophy, it must be established, as it was by the autopsy, that there existed no perceptible mechanical cause. But, inasmuch as the microscopic examination revealed only a true muscular hypertrophy, and as this form of hypertrophy is, as yet, attributed only to mechanical causes (true hypertrophy from work, of Rindfleisch), something which is not demonstrable on the cadaver must have acted during life in a similar manner. This being premised, it is easy to bring forward as the origin of the excentric hypertrophy in this case a cause similar to that given in the observations of Traube,—namely, severe and prolonged bodily exercise.

Upon the supposition that this was the cause of the hypertrophy, it is easy to explain the proportional involvement of both sides of the heart. The continued muscular effort of the left side, together with the reaction from the increased pressure of the column of blood in the aorta and its branches, would furnish the cause of the increase of the arterial side of the heart; while upon the other side of the organ a like effect would result from the increased activity of the respiratory function, and consequent disturbance of the lesser circulation. After the hypertrophy had existed for some time, the patient meanwhile continuing to make the exertions to which his diseased state was due, fatty degeneration began. At the time of the first admission of the patient into the hospital, eight months before his death, his heart, although in a state of fatty degeneration, still had power enough to enable him to attend to his work until an intercurrent attack of bronchitis overcame the force of the diseased and weakened organ, and forced him to his bed. At the time of his death, the relaxed heart still had force enough to maintain the circulation while the patient remained quiet in the horizontal position; but when he stood up and attempted to walk, the task was too great for it: a sudden paralysis of its functions took place, and an acute œdema of the brain occurred, resulting in instant death.

WM. ASHBRIDGE, M.D.

ANEURISM OF THE EXTERNAL ILIAC (*The Lancet*, December 20, 1873).—Mr. Wheelhouse reports the following interesting and unusual case: A man, æt. 31, of temperate habits, applied at the infirmary for treatment; and, on examination, there was found a large pulsating and expansile tumor in the right iliac fossa, reaching from Poupart's ligament upwards to within two inches of the umbilicus, and extending in an outward direction almost to the spine of the ilium. It was about the size of a small cocoanut, hard and firm at the lower part, and softer in the upper portion, with pulsations and dilatations synchronous with the pulse in the left femoral artery. The swelling appeared to be connected wholly with the external iliac artery, but to extend above and overlap the common iliac; and, although pressure could not be made on the latter sufficient to stop the beating, it was easily controlled by pressure on the abdominal aorta just above its bifurcation.

Treatment by compression was determined upon; chloroform was administered until the muscles were relaxed, when ether was substituted, and its action kept up continuously for five hours. Lister's large abdominal tourniquet was applied just over the umbilicus, and slowly screwed down until the flow of blood through the aneurism was arrested. In about two hours, the foot becoming cold and blue, the tourniquet was unscrewed slightly; pulsation in the tumor returned, and it was at once reapplied. Two hours later the right limb was blue to the groin, and the left to the knee. Pressure was then slightly relaxed, the tumor being much harder, but still perceptibly pulsating. At the end of another hour both limbs were black, and the body was blue as far as the tourniquet, which was then removed gradually in fifteen minutes, a quarter-turn of the handle being taken every minute. The tumor had ceased to pulsate, and was firm and hard. The limbs were wrapped in wool, and a hypodermic injection of morphia given. On the following day pulsation returned in the tumor with considerable force, but slowly diminished; and by the next evening the tumor was almost fully reconsolidated, and both limbs were normal as to warmth. The cure was complete and permanent.

THE PHYSIOLOGICAL ACTION OF OZONE (*The British Medical Journal*, December 13, 1873).—Dr. McKendrick and Mr. Dewar, in the course of some experimental investigations with animals, found that—

1. The inhalation of an atmosphere highly charged with ozone diminished the number of respirations per minute.
2. The pulsations of the heart were reduced in strength, and this organ was found beating feebly after the death of the animal, which showed that life was not destroyed by direct action on the heart.
3. The blood was always found in a venous condition in all parts of the body, both in cases of death in an atmosphere of ozonized air and of ozonized oxygen.
4. Ozone exercised a destructive action on the living animal tissues if brought into immediate contact with them, but it did not affect them so readily if they were covered by a layer of fluid.
5. Ozone acted as an irritant to the mucous membrane of the nostrils and air-passages, as all observers had previously remarked.

VACCINATION FROM A VARIOLOUS PATIENT WITHOUT COMMUNICATING SMALLPOX (*The British Medical Journal*, December 13, 1873).—During an epidemic of smallpox in a small town, a boy, fourteen years of age, was vaccinated; the arm took well, and about a dozen persons were re-vaccinated from it. On the thirteenth day the boy went to bed with an attack of confluent smallpox; was very ill for a week, and then rapidly recovered. No variola was communicated in any of the cases, and all the arms took well.

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EDITORIAL.

OUR NEW CHARITY.

AMID the multiplicity of charities which distinguish the progressive civilization of the times, and which in their broad beneficence seek to alleviate human misery, there has been, until recently, in this community, one class for which no organized effort has been made,—a class which on no principle, it would seem, should thus have been left outside the pale of humanitarian and Christian helpfulness.

While the enemies of society, the murderer and the burglar, have been made the objects of philanthropic endeavor, no hand has been outstretched to rescue from utter ruin those who, but for one false step, were worthy members of the community.

Surely, if deliberate, calculating fraud, villany, and outrage do not exclude their perpetrators from helpful pity, one effort at least might well be allowed in behalf of those whose transgression, however great, illustrates human infirmity rather than depravity. Efforts to relieve and reclaim are not arguments in extenuation; but "Go and sin no more" comes to us with a sanction which we dare not despise.

To the shame of our great city, the class of unfortunates alluded to has hitherto had but three alternatives,—murder, suicide, or the Almshouse. Of the inevitable results following exposure to the associations of that institution, it is not necessary to speak. For such as these, over its portals might

well be written, "Abandon hope, all ye who enter here!" Apart, moreover, from any claim to sympathy which may be urged in behalf of the erring ones, there can be no question as to the propriety of securing for their innocent offspring more favorable auspices than a birth in the County Poor-House would afford.

Impressed by considerations like these, a few gentlemen met together about one year since, to devise some plan by which, even if the sorrows of these deluded creatures might not be mitigated, the necessity of a life of open shame should at least be spared them.

As the result of the conference, the STATE HOSPITAL FOR WOMEN AND INFANTS was developed, a Board of Governors and a Medical Staff were organized, a house (No. 1718 Filbert Street) was rented, and, thanks to the energy, enterprise, and unremitting industry of a few ladies, whose co-operation had been solicited, the house was comfortably furnished. An excellent matron has superintended the internal economy of the house; and the periodical visits of the ladies' committee have contributed in no small degree to the success of the undertaking, and to arrangements by which discharged patients could reputably maintain themselves.

During eleven months since the opening of the hospital, forty patients have availed themselves of the asylum thus afforded; and eighteen are now either under its roof or registered for early admission. No loss of life has occurred among the patients; and homes have been provided, by adoption or otherwise, for most of the children born in the institution.

Another object contemplated in the establishment of the hospital was a provision for the treatment of worthy women requiring skilful medical care and nursing, to enable them to maintain their families instead of dragging out a miserable and painful existence, not only helpless, but a burden to others.

Either class of patients is required, when able, to contribute according to their ability to the support of the institution; but very many must be provided for out of the funds of the hospital.

For the objects of this new charity, thus set forth, a most earnest appeal is made by the Board of Governors. The needs of erring and suffering women, the reasonable hope that they may not only be saved from greater error or suffering, but restored to lives of usefulness, are the arguments on which the appeal is based. Whether the enterprise shall succeed, depends upon the benevolence and the Christian convictions of the community. It will

be a sad commentary upon the intelligence of our vaunted philanthropy if frailty must needs degenerate into depravity before succor is tendered,—if the Midnight Mission and the Magdalen Asylum must remain the only or the nearest cities of refuge.

The President of the Board of Governors, Dr. J. W. White, will be happy to receive substantial encouragement for this worthy enterprise.

SELECTIONS.

EUCALYPTUS GLOBULUS: ITS USE IN THERAPEUTICS AND ITS VALUE AS A FEVER-DESTROYER.

THE therapeutic value and uses of the *Eucalyptus globulus* are thus described by Dr. S. Ringer in the *London Medical Record*:

In March, 1870, M. Cloez announced that *Eucalyptus globulus* consists of chlorophyl, cellulose, essential oil (eucalyptol), resin, tannin, lime, and alkaline salts. M. Debray (*De l'Eucalyptus Globulus*, Paris, 1872) and M. Rabuteau (*Communication à l'Académie des Sciences*, November, 1872) confirm these researches. Eucalyptol, a liquid camphor, $C_{10}H_{18}O_2$, possesses almost all the active properties of the plant, which does not contain an alkaloid. When applied to mucous membranes, eucalyptol excites congestion according to the strength of the application. A few drops produce a sensation of coldness in the mouth, whilst one or two grammes (15.5 to 31 grains) excite disagreeable warmth in the mouth, and pain in the stomach and intestines. A small dose promotes appetite, a large one destroys it.

Gimbert employs small quantities of the essential oil, on account of its antiseptic and stimulant properties, in tooth-powders, gargles, eye-washes, and applications to wounds, especially unhealthy wounds. It can be given in capsules; and, by administering it with food, we avoid irritation of the œsophagus or stomach.

A moderate dose of eucalyptol, ten to twenty drops, at first accelerates the pulse, produces pleasant general excitement, shown by irresistible desire for moving about, and a feeling of buoyancy, increased appetite, strength, and sexual appetite. It is an intoxicating medicine, but, unlike opium or a large dose of alcohol, these effects are not followed by brutishness and torpor, but produce a general calmness and soothing sleep. Intoxication is not constant; often it only stimulates. M. Gubler says this excitement may amount to fever; and Gimbert believes that he has produced fever in a dog by subcutaneous injection. M. A. Sicard suffered from a severe attack of migraine after inhaling eucalyptol. In one case it produced cerebral congestion, with much excitement, and in another painful palpitation of the heart. This essential oil, however, rarely provokes these symptoms, and in strong men only after ten or twelve drops, while five to six drops may produce them in nervous persons.

It affects animals as man. They become active, and their senses are made more acute. Excitement is followed by tranquillity and lethargy. Arterial tension is diminished; the temperature falls. Circulation is stimulated by the action of the remedy on the sympathetic. Even moderate doses, if continued for some time, produce an asthenic state. The temperature falls a degree to a degree and a half below natural. The pulse becomes less frequent, and may fall to fifty beats per minute. The senses (and the muscular sense) are

blunted. The functions of the brain are unaffected, there is no stupor, and the size of the pupil is unaltered. The reflex functions of the cord are depressed. These symptoms, rare in young and vigorous people, but more easily produced in old persons, may excite alarm, but are without seriousness, and are removed by a cup of coffee. Eucalyptus, when fatal, kills by destroying the excito-motor functions of the cord; the temperature also falls considerably. An old man with vesical catarrh took, by mistake, eighty drops of eucalyptol, which produced feeling of internal heat and paralysis of the extremities. He had only an objective consciousness of his extremities, and when he shut his eyes he was unaware of their existence. When he wished to move his arms or legs they obeyed him imperfectly, the movements being feeble and disorderly. The sphincters retained their tonicity. A cup of coffee removed these symptoms.

Gimbert says there is a close resemblance between eucalyptol and bromide of potassium. He thinks the decline of the temperature important, and that it will guide us in the employment of this remedy, for in poisoning it falls rapidly; and hence the thermometer must be employed when we administer this medicine to produce its sedative effects, as in scarlet fever, tetanus, or other acute illnesses. Dangerous results may be averted by a few cups of coffee.

As in some doses it stimulates the sympathetic and promotes capillary circulation, he recommends it in congestions and paralysis of the capillaries. It will disperse many cerebral and pulmonary congestions, but whilst serviceable in chronic bronchitis, it overstimulates in acute. Piles sometimes disappear during its administration, perhaps from the local effects, but most likely from its effects on the pelvic sympathetic. In large doses the stimulating effects of this essential oil are slight, and it soon produces asthenia and then paralysis.

Eucalyptol is absorbed by the stomach and lungs. It is eliminated by the lungs (for the breath smells of it even after an anal injection), the kidneys, and skin. In its passage through the lungs it contracts the capillaries, promotes circulation, and hence deepens respiration, and thus in lung-complaints it removes congestion. Elimination may excite irritation of the bronchial tubes (shown by increased cough and hæmoptysis if there be tubercle) if it be administered in too large doses or in unsuitable cases. Gimbert is doubtful concerning its usefulness in checking hæmoptysis; he thinks it may be good where the capillaries only are ruptured, but in hæmoptysis due to softened tubercle he considers it highly dangerous.

It is eliminated by the kidneys in an oxidized form, and makes the urine smell of violets; the powder and tincture, however, produce a herbaceous smell, or leave the smell unaffected. Gubler believes it is chiefly eliminated by the lungs. It greatly increases the elimination of urea: thus, Gimbert usually passes twenty grammes in the twenty-four hours, but under the influence of this medicine he voided forty grammes in the same time. The urine is yellow and clear after eucalyptol, but red after the powder. The essential oil escapes through the skin, rendering the sweat odorous and sometimes producing eruptions. Gimbert gives the following conclusions. It is an antiseptic, by preventing decomposition of organic substances, and particularly of blood. It is a powerful general stimulant, through its primary action on the nervous centres and sympathetic, thereby quickening the capillary circulation. Through its influence on the nervous system, it is antispasmodic. By diminishing the excito-motor activity of the cord, by lessening animal combustion, the frequency of the respiration, and the circulation, it becomes a febrifuge and sedative.

He recommends as applications for neuralgia the essential oil, a few drops sprinkled on flannel, or the following liniment: Eucalyptol, eight grammes; oil of sweet almonds, forty grammes. Internally, he prefers either the essential oil or a liquid extract, preferring it to the powder, which is bulky and difficult to digest. Burning the leaves removes bad smells from sick-rooms, and the fumes inhaled afford relief in chronic bronchitis. As cigarettes, the leaves are useful in humid asthma.

Dr. A. B. Stout merely confirms many of the conclusions of the previous writer. When the empyreumatic oil of the leaves is evaporated, it diffuses an agreeable odor throughout the house. He considers that the oil is allied to creasote and to pyroligneous and carbolic acids; hence its disinfectant and antiseptic qualities. He believes that the powder of the dried leaves scattered in trunks and among clothes will be as useful as camphor or tobacco in driving away or destroying moths and insects, and more agreeable. It is very valuable as a sedative and antiseptic in asthma, throat-diseases, nasal catarrhs, and affections of the mucous membranes.

Like Gimbart, he uses a concentrated tincture (one part of spirit to one of liquid extract), and employs this as an inhalation, which quickly relieves the spasms of asthma. He adds a tablespoonful of the tincture to the boiling water. Cigarettes made with coarsely powdered leaves are anodyne and antispasmodic.

Eucalyptus globulus (blue gum-tree) is a native of Tasmania, but is largely cultivated in the south of France, Spain, Algiers, etc. Dr. Lorinser (*Wiener Med. Wochenschrift*, No. 43, 1869) published some cases of intermittent fever successfully treated by a tincture in two-drachm doses made from the leaves. Dr. Bohn (*British Medical Journal*, March 2, 1872, from *Berliner Klin. Wochenschrift*, February 26, 1872) finds it useful in the fever of hectic as well as ague. Dr. Joseph Keller (*British Medical Journal*, May 11, 1871) treated 432 cases with this remedy; 71.76 per cent. were cured, 28.24 required quinia in addition. Of the 310 patients who were cured, no paroxysm occurred after the first dose in 202. Of 118 cases in which quinia had been given unsuccessfully, 91 recovered under the use of eucalyptus. Dr. Keller believes the plant grown in Austria is less efficacious than that imported from Australia. He considers it of especial use in obstinate ague which has resisted quinia, and that the average duration of treatment by eucalyptus is shorter than that by quinia. He uses a tincture made from the leaves (ten pounds of the leaves yielded twenty-five quarts of tincture). The average dose was two drachms, and the average quantity used for each patient was seven drachms.

Dr. Maclean (*The Practitioner*, November, 1871) recommends this medicine for the dyspnoea occurring in thoracic aneurisms and heart-disease. It should be smoked in a pipe, with or without tobacco, or the leaves may be made into a cigarette. If the dyspnoea be too severe to permit smoking, the patient should inhale the fumes from the burnt leaves.

He found that such discharges are capable of exerting a deleterious influence on the organism, and that gastric and intestinal catarrh, artificially produced, increases the liability to be affected by them. Air is capable of carrying with it particles of choleraic evacuations, and of producing very injurious effects; when the cholera-evacuations were disinfected with carbolic acid, or when those of ordinary diarrhoea were used, the inhalation of air which had been passed through them was followed by no evil results. In a like manner air saturated with the fluid from decomposing meat was comparatively harmless. He also found that a current of air passing through non-disinfected choleraic excretions carries with it cryptogamic elements, which vegetate abundantly in a favorable soil; while the same growths from discharges that have been disinfected by carbolic acid are incapable of multiplication; and he believes that choleraic discharges freed from organized elements are capable, by reason of their chemical composition, of producing the same pathological changes as they do when they contain the organized forms.

While the experiments were being carried on, the attendant, who had been exposed for some time to the emanations from the vessels containing the choleraic excreta, had a severe attack of gastro-intestinal catarrh, which recurred twice within a short period. His little daughter, who slept with him, had vomiting and diarrhoea the day after he became ill. Five days after his illness, two cases of cholera (one of which ended in death) occurred in the house in which he resided, which had hitherto been free from the disease. During the microscopic examination of the choleraic discharges, Dr. Högyes had loss of appetite, a coated tongue, and a constant sensation of oppression in the epigastrium; after the researches were complete, these uncomfortable feelings disappeared.

CASES ILLUSTRATING THE USE OF THE PNEUMATIC ASPIRATOR IN SURGERY (*The Boston Medical and Surgical Journal*, December 25, 1873).—Dr. Charles D. Homans reports the following cases in which the pneumatic aspirator was employed beneficially. A laborer, æt. 54, had an oblique inguinal hernia which became strangulated and remained so for three days. The hernial mass was about the size of a hen's egg, and very tender; taxis was tried unsuccessfully for half an hour, and then a fine aspirator-needle was thrust into the tumor, and from three to four drachms of fluid containing bubbles of air were withdrawn. Taxis was then again resorted to, and the hernia immediately returned. No unfavorable symptoms supervened. In a second case of strangulated hernia the tumor was punctured three successive times, but no fluid or gas passed out. The ordinary operation was then resorted to, and the tumor found to consist wholly of intestine tightly compressed, which explains why no fluid or air came from the puncture.

In a case of retention of urine, the bladder not having been emptied for thirty hours, and all attempts to introduce a catheter having failed, the needle was passed into the bladder behind the pubis and three pints of urine were drawn off. The bladder was again punctured on the following day, after which the urine came naturally, no bad effects resulting from the operation.

PERFORATION OF THE DUODENUM (*Vermont Medical Journal*, January, 1874).—Dr. A. P. Grinnell reports the case of a man æt. 55, who was suddenly attacked with severe epigastric pain while walking. The case was deemed one of colic, and was treated accordingly. In six hours the pain was less intense, pulse 80, and general condition apparently excellent; the following morning he rode seven miles to his home, and four hours later his pulse rose to 110, his extremities were cold,

GLEANINGS FROM OUR EXCHANGES.

THE EFFECT OF FRESH CHOLERAIC EXCRETIONS ON ANIMALS (*The British Medical Journal*, December 13, 1873).—Dr. Andreas Högyes, of the University of Pesth, availed himself of the opportunity afforded by the recent epidemic of cholera in that city, to make a series of investigations on the effects produced on animals by the discharges from persons suffering from the disease.

respiration was difficult, and he complained of excessive thirst. These symptoms all increased in severity, and he died thirty-three hours after he was first attacked. The post-mortem revealed a perforation of the duodenum one-half inch from the pylorus, through which had passed into the cavity of the peritoneum all substances taken as food or drink during his illness. An ulcer was discovered near the point of perforation, but no deviation from health was observable in other portions of the intestines or in the stomach. The peritoneum was inflamed over the greater portion of its surface, and large quantities of pus had accumulated in the pelvic regions. The case is peculiar from the absence of prominent symptoms. The pulse was unaffected until a few hours before death. There was no chill to usher in the peritonitis; there was no nausea, vomiting, or tympany, and he had never had any gastric or abdominal pain before the perforation occurred.

RETENTION OF URINE (*The Lancet*, September 27, 1873).—A sailor, æt. 26, after a protracted gleet, became affected with a severe urethral stricture, which finally produced almost complete retention of urine, only a few drops escaping involuntarily. No instrument could be introduced into his bladder. Four leeches were applied to his perineum, and he was ordered to remain in bed. In a short time a fine filiform bougie was passed into his bladder, and was left there for thirty-six hours, when it was followed by a No. 5 French whalebone bougie; larger sizes were then successfully passed until a complete cure was effected. In remarking on the case, Mr. Teeran said that there were few strictures, however severe, which would not yield to a combined assault with leeches and filiform bougies, and they could be employed on the most diseased subjects without the slightest fear. They would also, as a rule, obviate any recourse to operative procedures.

MISCELLANY.

UNIVERSITY HOSPITAL.—At the meeting of the Board of Trustees of the University of Pennsylvania, on Tuesday, January 6, an organization of the new hospital to be connected with the medical department of the institution was decided upon. The Board of Managers is to be composed of eighteen members: five trustees, elected yearly by the trustees; the seven Professors of the regular faculty; three alumni, chosen by the executive committee of the Society of the Alumni; and three contributors, elected by the contributors. The elections of the last six have to be confirmed by the general board of trustees before they are valid. Every person who has given twenty-five dollars is declared a contributor. Four new professorships were created,—the incumbents to serve without salary, and to be entitled Professors in the Hospital of the University: one of clinical medicine, one of clinical surgery, one of clinical obstetrics and diseases of children, and one of ophthalmology. These professors are, with certain lecturers, to constitute the medical staff of the hospital. The decision as to what lectureships shall be created, and the appointment of lecturers, are left to the medical faculty.

The general management of the hospital is to be entrusted to the Board of Managers, but the medical staff is to have the decision of such questions as the division

of beds. The Trustees of the University retain the right to modify the above plan if at any time it should seem best.

We congratulate the Collecting Committee on the great success which their energy and skill have secured for the movement. Including the value of the land, the whole sum secured approximates \$800,000.

THEN AND NOW.—"Formerly, the great aim of the surgeon was to accomplish his awful but necessary duty to his agonized patient as rapidly as possible, and a clinical clerk, with a watch, always stood by to note the time so occupied. Mr. Herbert Mayo performed amputation at the hip-joint in ninety seconds. Mr. Edward Hutton amputated the middle of the thigh in seventy-eight seconds; and I have heard Jobert de Lamballe pronounce, not very slowly, the words, *un, deux, trois*, while he, with lightning speed, removed an arm at the shoulder. We have changed all this. We operate, like the sculptor, upon an insensible mass; we go carefully through our work, and, although accomplishing it as quickly as we can, we do not count the seconds."—*Prof. Quinlan*, in *Medical Times and Gazette*, November 8, 1873.

ARTIFICIAL BUTTER.—This new commodity, manufactured from beef-suet, having met with an extensive sale in London and Paris, is now being introduced by M. Paraf into the markets of New York and Boston. We must admit that the single specimen seen by us had both the appearance and taste of ordinary firkin butter. The butter is made from the yellow, tasteless, and odorless oil that is obtained from beef-suet. This oil is placed in churns, with one-fifth its weight of sour milk, and churned until an emulsion is formed, annatto being added to give it the required color. It is then cooled, and worked, and salted like common butter.—*Boston Medical and Surgical Journal*.

NOTES AND QUERIES.

BLUE PUS.

TO THE EDITOR OF THE PHILADELPHIA MEDICAL TIMES:

In the last number of the *Times*, December 27, under the head of "Notes and Queries," Dr. Cohen reports a very interesting case of the discharge of *blue pus* from an abscess due to laryngeal chondritis, and asks for "any information on this subject, communicated personally, or through the medium of the *Times*."

In the *British Medical Journal* for December 13, 1873, under the heading "Cyanopuon Laryngis: Thyroiditis with Blue Suppuration," is the record of a case by Sir G. Duncan Gibb, M.D., which is almost a duplicate of Dr. Cohen's.

Dr. Cohen says he was unable to determine the location of the abscess, but was inclined to believe it "connected with the cricoid cartilage." Dr. Gibb says the abscess in his case was "consequent upon inflammation of the ring of the thyroid cartilage," and upon puncturing it "a drachm and a half of pus was evacuated, of a dark blue color, not quite so dark as Prussian blue, but more of an azure tint." For a week some discharge of the blue pus continued; after this, though pus was discharged, it was not discolored; and by the twenty-fifth day the opening had closed, and the patient was considered cured.

The original seat of the trouble, according to Dr. Gibb, "seemed to have been beneath the perichondrium of the thyroid cartilage," and although "in the laryngeal mirror the integrity of the larynx was seen to be perfect, and the voice was good, whether in speaking or in attempts to utter

contralto notes," yet necrosis or other trouble of the thyroid cartilage was feared. However, the case occurred in October, 1870, and he says two years have now elapsed without any subsequent trouble.

Dr. Gibb refers to a case of his, published in the *British-American Medical and Physical Journal* for September, 1850, which has been quoted by Mr. Holmes Coats in the article "Abscess" in Holmes's Surgery, and to another brought before the British Association for the Advancement of Science, in 1864, by Dr. Herapath. Dr. Gibb, in experimenting to determine the nature of the discharged fluid, says,—

"1. Liquor potassæ added to the blue pus discharged the blue color, which it does with Prussian blue.

"2. The addition of dilute nitric acid for the most part restores the blue color, which it also does with Prussian blue.

"3. Some of the pus was evaporated to dryness, and ignited; the calx, acted upon by a solution of the ferrocyanide of potassium, gave a distinct alteration of Prussian blue."

The patient had not been taking any preparation of iron recently. Dr. Gibb looked upon it as "due to some physiological change analogous to that which gives rise sometimes to indigo in the urine," and places the case on record as "unique in its combination of thyroditis running into suppuration, the pus being charged with a salt of iron, giving to it a decided dark blue color."

In the *Archives Générales de Médecine* for December, 1873, there may be found a very interesting paper by M. Maurice Longuet, entitled "Mémoire pour servir à l'Histoire de la Coloration bleue des Linges à Pansement," in which he records what may be entitled an "epidemic of blue suppuration," for in his ward in La Charité he had twenty-two cases. M. Longuet objects to the term *blue suppuration* which has hitherto been used to designate such cases, for he was able to produce the blue coloration on the sound portions of the bodies of some of his patients who were yielding the *blue pus* simply by dressing the parts in the same manner as the wounds. Unlike the reaction in Dr. Gibb's case, Dr. Longuet, on repeating the experiments made by Dr. Rouher, of Strasburg, in 1860, found, as he says, that "ils rejettent bien loin cette idée qui attribuait l'apparition de cette teinte à la production du bleu de Prusse ou de phosphate de fer aux dépens du fer contenu dans le sang et des phosphates alcalins ou des combinaisons cyanurées séparées des liquides animaux par suite d'une altération quelconque."

He, however, closes the first part of his article by acknowledging a difference between the *blue pus* of open wounds and that which is "*primi-tivement bleu*," as flowing from a freshly-opened abscess.

The coincidence between Dr. Gibb's and Dr. Cohen's cases—both coming from the cartilages of the throat—would predispose one to think that the laryngeal cartilages, or perhaps cartilage *per se*, were essential to its production; but M. Longuet says that in the practice of M. Richet at the Hôtel-Dieu, early in last year, he saw *blue pus* flow out of an abscess of the breast at the moment of lancing it.

JOHN D. JACKSON.

DANVILLE, KY., January 2, 1873.

TO THE EDITOR OF THE PHILADELPHIA MEDICAL TIMES:

In looking over the number of your journal for November 8 I came across an article entitled "Is the Presence of the Hymen a Proof of Virginity?" by Charles W. Brown, M.D. As I have just had a case in which labor was complicated with the presence of the hymen, the article attracted my attention, but on close inspection I found it rather indefinite.

We find that Dr. Brown makes the following statements: "Upon examination I found the hymen *intact*, and *quite firm and rigid*;" continuing, he tells us that at the lower part of the membrane was a small aperture through which he was unable to introduce the tip of his little finger without some difficulty. The parts were *excessively tender*; this small aperture was gradually dilated by constant pressure of *two hours*; at the end, he was able to introduce his first and second fingers, and find out the condition of the uterus; this being done, an opiate was given, and exit doctor for three hours, *while the hymen makes its exit not to return*; for it is not mentioned *after* this. Now the question arises, What became of the hymen? Did it *dilate* with the uterus? Did it rupture, or did the doctor operate?

The first is not likely to have occurred; and his description would lead us to infer that it was too rigid to rupture, for, according to his statement, after a constant pressure of *two hours* the orifice was only large enough to admit of the introduction of the first and second fingers, and that with difficulty.

The third can be answered by a negative; for, had the doctor operated, he would not have omitted reporting it. Now, again we repeat, What became of the hymen? for we see that labor has been completed by forceps. Now, if the hymen has remained intact,—for as such the doctor

leaves it at his first visit,—he must have applied the forceps and delivered the child through an opening of an inch and a quarter in circumference,—a thing highly improbable.

I remain yours, respectfully,

EUGENE P. BERNARDY, M.D.,
1011 Walnut Street, Philada.

TO THE EDITOR OF THE PHILADELPHIA MEDICAL TIMES:

DEAR SIR,—I have noticed the article which appeared in the last issue of the *Medical Times* under the heading of "Notes and Queries," selecting me as a subject through whom a thrust at the dignity of the dental profession might be made, and implying my professional status as being questionable. I trust you will do me the simple justice to publish a brief reply. First, I am a regular graduate of dentistry. Second, I have adopted the administration of nitrous oxide for the painless extraction of teeth as a *special business or practice*. I do not practise dentistry, therefore the dental profession is not in any manner responsible for my business. My position in relation to the dental profession may be likened to that of the apothecary in his relations to the medical profession. The medical practitioner would not enjoy being obliged to compound his prescriptions; and the manufacture and administration of nitrous oxide involve so many troublesome details that it is a like convenience to the dentist to be able to send his patient to some one who makes a special business of that branch. The fact that I advertise renders me ineligible to become a member of the dental societies; and, being fully aware of this, I have never sought to become one. Therefore I am not a suitable subject through whom to make a thrust at the status of the profession. Neither am I a proper subject for unkind or personal criticism. I am conscientiously following a humane calling, and know that I am doing a vast amount of good in relieving the sufferings of my fellow-beings, and have every reason to believe that I enjoy the confidence and respect of the majority of our most eminent men in the medical and dental professions, and of the people of Philadelphia. Dentists in regular practice who have attempted to use nitrous oxide have generally been discouraged in using it, and many have abandoned it as an anæsthetic; why? It is because it is a very peculiar business, requiring great experience to enable one to make it successful. I am charged, because I have made use of the public press to place my name and business before the public, with violating my professional trust, and ignoring the "code of ethics" of the profession. To say the least, this is a discourteous fling, when it is considered that had it not been for the public press the community would not be reaping the benefits of this great boon, as the professions did not, and would not, accept it in the character of an anæsthetic until it became so popular through this medium that they were obliged to award it position as such.

Trusting the next effort made to impugn the status of dentistry as a profession may find a more suitable scapegoat than your humble servant,

I am, very respectfully, yours,

F. R. THOMAS, D.D.S.

Philadelphia, January 8, 1874.

[We insert the letter of Dr. Thomas with pleasure, and take the opportunity of stating that the gentleman who wrote the answer to "Dens" was mistaken in his qualified assertion that the dentists have no code of ethics. Leading dentists inform us that Dr. Thomas—as he himself states—is not recognized by the dental profession as belonging in its ranks, and one sitting in authority tells us that he holds the same relation to the dental profession that Kolbe the splint-maker, or Smith the leecher, does to the medical profession. Like ordinary folk, we thought it was the function of dentists to extract teeth, and, when we saw dentists of standing recommending patients to Dr. Thomas for the removal of sinning bicuspid and molars, concluded he was a dentist—beg pardon, an oral surgeon. It seems he is not. What with seeing oral surgeons amputate limbs, remove arachnoid tumors, cut, slash, divide everywhere, and with hearing that men who extract teeth are not oral surgeons, our finite mind is very much befogged. It's here you see it and there you don't, until under what thimble the ball is we can't tell.—ED. P. M. T.]

OFFICIAL LIST

OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U.S. ARMY, FROM JANUARY 6, 1874, TO JANUARY 12, 1874, INCLUSIVE.

CAMPBELL, A. B., ASSISTANT-SURGEON.—Assigned to duty at Fort McIntosh, Texas. S. O. 1, Department of Texas, January 3, 1874.

SATURDAY, JANUARY 24, 1874.

ORIGINAL COMMUNICATIONS.

SPINAL CONGESTION AND LOCOMOTOR ATAXIA.

BY GEORGE M. BEARD, M.D.

SPINAL congestion is a condition which, though long recognized by neurologists, is yet by the mass of the profession usually ignored, or confounded with various other diseases. It is unfortunate that this disease is not more correctly and thoroughly described in lecture-rooms and in our text-books of general medicine, for these reasons: 1. It is an affection not infrequent, and, as it sometimes comes on suddenly, it is likely to fall under the observation of the general practitioner. 2. It is very susceptible of treatment, provided that treatment be judicious. 3. When neglected, or improperly treated, it sometimes goes on to serious and incurable structural lesions of the cord, with the symptoms of permanent paralysis of motion, or of sensation, or of both.

There is no one symptom that certainly indicates spinal congestion; but there are a large number of symptoms which, when taken together, and studied with the history of the case, will enable us to make out the diagnosis with perhaps as much accuracy as we are wont to make out the diagnosis of congestion of the lungs or the first stages of pneumonia. The group of sensory and motor symptoms that are caused by spinal congestion is as follows. I give them in their anatomical order, rather than according to the degree of their relative importance:

1. *Headache.*—The pain may be on the back, or top, or on the front part of the head. The nerves that ache are those which take their origin in the cervical region of the cord or in the lower part of the brain. There may be tender points in the crown, or on the forehead, or on different parts of the back or sides of the head.

2. *Stiffness of the neck, with tenderness and pain in the cervical vertebræ.*—This stiffness may be so great as to suggest the idea of rheumatism, or a common cold; and patients thus affected frequently say that they have taken cold, or that they have the rheumatism in the neck. On attempting to turn the head, pain arises, and sometimes the patient acts as though he had torticollis, or wry neck, which is an entirely different affection. To superficial observation the patient gives every appearance of being a sufferer from muscular trouble, and it is no strange thing that this affection so often passes for rheumatism. The muscles, however, have nothing to do with the matter, nor have the nerve-branches. The disease is in and around the cord, and it is in and around the vertebræ that pain and tenderness appear.

3. *Heat and pain down the spine, with or without tenderness.*—In certain stages, when the congestion is of a subacute character, the pain and heat do not

appear, or, at least, are not constant. The heat and burning are not confined to the narrow region of the vertebræ, but radiate all over the back. Over-exertion, as long standing or walking, or a sudden shock or blow, or the strain of lifting, or the recumbent position, usually aggravates the pain and heat in the back.

4. *Feeling of pressure on the chest.*—This symptom, which to my mind is quite an important one, seems to have been overlooked by writers on the subject. The "feeling of pressure" is one that patients, even when not questioned, frequently speak of, and it suggests, almost always, spinal-cord trouble, though not necessarily of a grave character. Patients in localizing this symptom usually place the hand on the lower part of the breast-bone.

5. *Dyspnoea and palpitation.*—These symptoms would very naturally arise from severe congestion of the dorsal region of the cord, and in a mild form are not uncommon.

6. *Feeling of constriction around the abdomen.*—This symptom has long been recognized. It is, however, not peculiar to spinal congestion, as such. In actual sclerosis of various kinds it also appears, and it is by no means constant.

7. *Bladder and rectal disorders.*—Incontinence with dribbling of the urine, constipation, or diarrhoea, may occur. Constipation is more frequent than diarrhoea. Amazing and persistent flatulence, with rumbling in the bowels, is a symptom that I have often observed.

8. *Excessive sexual excitement, with erections and emissions.*—Sometimes the sexual desire is very annoying, and the capacity for sexual intercourse is increased to an extent at once astonishing and alarming. Patients deceive themselves quite often with the belief that this sudden torrent of sexual desire is a sign of health; but, when read rightly, it is a sign of weakness rather than of strength: it is pathological, not physiological. It is analogous to the startling activity and brilliancy of the brain that sometimes precede insanity, or to the ferocious and gnawing appetite that attends the early stages of dyspepsia. Excessive functional activity is a characteristic, not of health, but of disease.

9. *Sensory and motor disturbances, of a mild character, in the upper and lower limbs.*—There may be mild hyperæsthesia or anæsthesia,—that is, excessive tenderness in the soles of the feet, or in the fingers, or over the whole surface of the limbs,—or the reverse condition, slight and varying numbness, a feeling as though the limbs were asleep, or just being roused from sleep, as when we first rise after long sitting in a hard chair. A frequent symptom is a *feeling of heat and burning* in the bottoms of the feet,—a sensation as though the patient were stepping on straw, or rubber, or velvet. Then there may be sudden constrictions of the ankle or thigh, as though a cord were tightly drawn about them.

Neuralgic pains of a sharp, shooting, boring, stabbing character run up and down the limbs, and are felt especially in the borders of the feet, sometimes in the arms and thighs.

Among the mild motor symptoms are twitchings of the muscles or of parts of the muscles, the so-called fibrillary contractions. These involuntary contractions of the muscles have been supposed to be diagnostic of progressive muscular atrophy; but this is a serious error, and one that should be corrected as rapidly as possible, for progressive muscular atrophy is a very solemn disease, that generally, though not always, means death. But these fibrillary contractions occur in thousands of cases that never have another symptom of progressive muscular atrophy.

Jerking of the body or of the limbs on going to sleep is a symptom that sometimes alarms the patient more than it ought to, but is really quite inconvenient, and sometimes makes it very hard to get to sleep. Sometimes the body is apparently thrown up from the bed and comes down with a jar and a bounce. When these jerkings are very mild they do not always wake up the patient, provided he is sound asleep.

To all this indictment may be added a weakness in walking, especially in going up-hill or in ascending stairs. Sometimes it is more wearying to stand than to walk. The concussion of riding in springless wagons usually increases all these symptoms. In walking, the patient sometimes feels as though he were wading knee-deep in water.

10. *Fixed paralysis of motion or sensation, or of both, in the limbs, with or without muscular contractions.*—This condition occurs only in very bad or much-neglected cases. When it does occur, it may be accompanied by bed-sores that are hard to heal. The electro-muscular contractility will be diminished, and the æsthesiometer may indicate great anæsthesia.

In looking over this list of symptoms, it is clear that they may, nearly all of them, be referred to disturbance of the nerves of motion or of sensation; which disturbance is due to the compression of the roots of the nerves in the cord, and to the changes in innervation that result from the presence of too much blood in the nerve-centres. A radical and ever-recurring difficulty in making the diagnosis is found in the fact that nearly all of these symptoms, or at least very many of them, may come from precisely the opposite condition, *anæmia*, with exhaustion of the cord. Excess of blood and deficiency of blood in the brain or in the spinal cord express themselves by the same manifestations. How shall we distinguish? He who says that it is never a difficult matter to make the distinction, is either a very great genius or a very great fool. I know of no single disease in the department of neurology that offers so good a test of diagnostic skill as this: he who has mastered this will find the other and graver lesions, so far as they are known, comparatively simple. There are several general facts which, if they are kept in mind and well considered, will help us to obtain a reasonable certainty.

1. *The history of the case.*—Active and fixed spinal congestion usually gives a history of exposure to cold or injury of some sort, that would explain the symptoms. To get this history, we must frequently inquire

into the life and habits of the patient months, if not years, previous. Symptoms that come from exhausted and anæmic cords cannot be referred usually to any exposure, although they may be aggravated by falls or blows or over-exertion.

2. *The symptoms coming from spinal congestion are more or less fixed and permanent, and are usually worse when the patient is in a recumbent position.*

—The patient with spinal congestion is apt not only to be worse at night, but in the morning, or sometimes, I have observed, for several hours after rising. Cords that are simply exhausted are oftentimes relieved by recumbency; though this rule is not so invariable as has been claimed. The symptoms of exhaustion are fleeting, changing and uncertain—to-day they are here, to-morrow there; and to a degree the same is true of the *early* stages of spinal congestion, but not of the later stages.

3. *Spinal congestion is more likely to occur in the sanguine, bilious, and lymphatic temperaments; exhaustion, in the nervous temperament.*—Patients who are generally anæmic and nervously exhausted, and in whom anæmic murmurs can be detected, would be more likely to suffer from exhausted cords than those who are plethoric and hardy. I have long observed that the *majority* of my cases of spinal congestion and the degeneration to which congestion leads are more frequent *by far* among the sturdy and muscular than among the delicate and nervous.

4. *The female sex is less disposed to congestion of the spine than the male sex.*—When a woman presents the symptoms above described, there is a presumption that exhaustion, and not congestion, is indicated. Then the graver forms of spinal-cord disease are less frequent among women than among men. Of ataxic patients, take them as they come in all ranks of society, there are ten men to one woman. I would account for this comparative exemption of women, *first*, by the fact that the nervous temperament prevails in them far more than in men; and *second*, by the fact that they are much less exposed to wet and cold and to those violent mechanical injuries that excite congestion.

5. *The tenderness over the vertebræ is usually much greater when the cord is exhausted than when it is congested.*—In the so-styled spinal irritation, when exhaustion, with anæmia or alternations of anæmia and hyperæmia, constitutes the probable pathology, the vertebral tenderness is frequently very pronounced, as every physician knows. The hyper-æsthesia is so great that the touch of the hand can scarcely be borne. In spinal congestion, this *extreme* tenderness is rarely if ever seen. Tender points can very often, if not usually, be detected in the middle dorsal and middle lumbar vertebræ when sufficient pressure is used, in the various stages not only of congestion, but of sclerosis of the cord. The fancy which some have advocated, that in serious and organic lesions of the cord tenderness of the vertebræ does not exist, has only this basis of fact, that tenderness tends to diminish as the disease of the cord passes from the irritative and functional to the structural and incurable stages; and yet I have seen

not a few hopeless cases of ataxy and of progressive muscular atrophy, where the tenderness of the middle dorsal and lumbar *vertebræ* was not at all difficult to find.

6. *The results of treatment.*—In some cases it is impossible to decide beyond misgiving whether fixed congestion or simple exhaustion is the pathological condition. All the tests above presented fail us, and we are left in doubt, or if not in doubt we may be mistaken. Here comes in the final test,—the result of treatment. The treatment of spinal congestion in an active state is essentially different from the treatment of exhaustion purely; and according as the patient improves or grows worse may we judge whether we are right in our diagnosis. Dr. Sterling tells me that in a case where all the symptoms and history pointed to anæmia of the cord, treatment by phosphorus and strychnine did no good, and some harm; on turning right-about-face and using ergot in large doses, improvement began at once. Strychnine is a remedy of such peculiar power, and has so marked an action on the spinal cord, that it becomes a most excellent means for revising our diagnosis; a few doses may bring forth evil fruit and force us to look elsewhere for relief. Similarly, ergot, when given in large doses, will sometimes tell us in a few hours whether it is or is not the remedy that is wanted. I have seen cases where ergot in the course of two days aggravated all the symptoms, and I have seen cases where it relieved pains connected with spinal congestion in less than two hours.

You will observe that throughout this résumé of the symptoms and signs of spinal congestion I have kept in prominence constantly, at every step, the *radical distinction between a congestion of the cord of an active and fixed character, and a simple hyperæmia of a passive transient character, resulting from exhaustion, and alternating, it may be, with anæmia.*

In spinal exhaustion, there may be very likely a disproportionate quantity of blood in the cord or in some portion of it, especially after over-exertion; but this is a very different state from a permanent and active congestion. It occurs, as I have stated, in very different kinds of temperament, and requires different treatment. In any anæmic, neurasthenic patient, local and temporary congestions may occur in any part of the exhausted nerves: waves of hyperæmia may settle in the lower part of the cord, in obedience to the law of gravity, which the enfeebled vessels cannot resist. Those who have examined the retinas of nervous patients with the ophthalmoscope know how slight an influence is necessary to change the vascular condition of the fundus, how readily the veins and the arteries enlarge and contract under irritation.

Travellers by the region of Lake George are pointed out by the highway near Ticonderoga a natural curiosity in the shape of a double tree: there are two trunks, growing so closely together that they appear to be simply large branches of one tree; but at a distance from the ground they separate, and the one rises into an oak, and the other, I believe, into an elm. Thus it is with functional and organic diseases of the nervous system. They

begin with symptoms so similar that they appear as one, and for some distance in their course they can scarcely be distinguished; but careful study will show that they soon begin to diverge, and in time they diverge so widely that they have little or nothing in common. One goes on to severe disease, perhaps to death; he who is affected with the other may die at any time, but he never dies of that disease. A man may die with a functional disease, but he will not die of it; the disease may be upon him, and he die, but it is not that which kills him.

Treatment.—The treatment of fixed and active spinal congestion consists in the proper use of electricity, especially of the galvanic current,—in the form of central galvanization, if one chooses; and, if other associated symptoms require it, in the form of galvanization of the spine,—and the free use of ergot or iodide of potassium. Faradization with a pleasant and gentle current is also of value in spinal congestion, though usually it is inferior to galvanization. Both currents—faradaic and galvanic—have a most powerful *contracting* influence on involuntary muscles, as I have shown by a large number of experiments on dogs, rabbits, and on the dead subject. I have experimented with both currents on the involuntary muscular fibre of the intestines, the stomach, bladder, and spleen, and have confirmed repeatedly the statements which have been made in regard to the contracting power of electricity on these organs. I have further shown that the contraction takes place at both poles, as well as with both currents, and it consists in a steady and gradual drawing together of the muscular substance without *any immediate* relaxation; in this respect involuntary muscles act very differently from voluntary muscles, which—except when they are greatly fatigued—relax immediately after contraction. The effect of the contraction is a diminution in size of the organ that is acted on. Now, as the blood-vessels contain involuntary muscular fibre, their diameter must be diminished by electrization, and in this way congestion may be relieved.

I have found out in my researches—what I believe has not been before observed—that the positive pole has a stronger contracting influence on involuntary muscles than the negative pole. This differential action applies to both currents, and, so far as I can judge, without regard to the direction of the current. This fact, taken in relation with the fact that the chemical effect of the positive pole is less active than that of the negative, would explain, in part, the fact which I think I have observed,—that the positive pole is the more efficacious in treating spinal congestion. The influence of current-direction in the treatment of this and of other affections of the cord has been overdrawn. It may, indeed, be doubted, and for myself I do most seriously doubt, whether there is any such differential action between the ascending and descending currents as has been claimed. Without arguing the details of the subject here, I may say that all observation accords with physics and physiology in making the *polar* action more prominent than the effect of current-direction.

(To be continued.)

A CASE OF HYDROPHOBIA.

BY JOHN KNIGHT, M.D.

AT 9.30 P.M., October 12, 1873, I was called to see Henry W., aged 11 years. The messenger supposed him to be suffering from hydrophobia.

I found the patient sitting on a chair by the stove, complaining of headache, inability to spit, feeling of constriction of throat and chest. Pupils widely dilated. Pulse wavering, and so rapid that I was not able to count it. Skin hot and dry. Tongue parched, and much swollen, of a bluish color, showing a high state of congestion. I found a punctured wound on the inner surface of upper lip opened, the boy having been bitten in the lip and nose. The latter wound had healed kindly, and showed no signs of any injury. He made frequent attempts to clear his throat, making a noise as any one would who had a fish-bone in the throat,—which the bystanders called barking,—followed by ineffectual efforts to spit, there being no saliva about his mouth; then convulsive action of muscles with tendency to opisthotonos, but not hard enough to throw him off his chair. He had not swallowed anything since the previous morning at breakfast, but had constant thirst, and asked for a drink. I told his mother to get him a glass of water, that I might see what effect it would have. While she was getting the water off a table close by, he rose up, seeming to prepare himself for a struggle. As she came towards him he made a bound, caught the glass with both hands, forced it to his mouth, got a mouthful, but was unable to swallow one drop; it all flowed out of his mouth, and he went into a convulsion. That effort to get a drink was the most desperate I ever saw a human being make to accomplish any purpose. He not being able to swallow, I concluded to quiet him by injections; prepared an enema of starch-water containing one-half drachm of chloral, with one grain morph. sulph. When I would touch him with the nozzle of the syringe he would have a convulsion. After several attempts, I succeeded in throwing into his rectum about three-fourths of my solution, which had a very happy effect on the paroxysms, they being neither so frequent nor so hard; stopped all clearing of his throat and efforts at spitting. While the effect of the enema was at its height, he was able to take two swallows of water,—the first he had drunk for forty hours,—and in a few minutes he took two or three swallows more. Sometimes the sight of water would excite a convulsion, and again, being merely repulsive to him, he would turn his back, and make a motion to put it away, with his hands.

At 2 o'clock A.M., the convulsions having returned in force and frequency, I repeated the enema, with the same quantity of chloral and one-half grain of morphia, then went home. Visited him early in the morning; found he had died about 5 o'clock, in a convulsion. His mother informed me he had lain quiet until the convulsion in which he died.

This boy was bitten by a rabid dog on the 13th of September, at 8 A.M.; at 4 P.M. was admitted into one of our hospitals, where the opinion was given that, it being only a trifling affair, and several hours having elapsed since the biting, it was not necessary to do anything but watch the case.

On the 15th he escaped from the institution and went home, where no attention was given to his case until I saw him, the night before his death. Upon closely questioning his mother, a most ignorant Irishwoman, I find she saw nothing amiss with her boy until the night of the 9th of October,—twenty-six days after the biting. He was restless, unable to sleep well. Friday he was fretful and quarrelsome, and at night rested worse than on the preceding one. On Saturday he ate a little break-

fast,—his last; was cross, uneasy; kept moving about from place to place; quarrelled with the other children; slept none at night; had his first convulsion on Sunday morning; kept moving all day from place to place.

My main object in placing this case before the profession is to call their attention to the fact that it is better, when called to such a case, to use every known means to prevent the system being poisoned by the virus, though several hours or days may have elapsed since the injury.

The period of incubation in this case being prolonged to twenty-six days shows that the virus was not taken up by the absorbents for several days after the biting.

FOX CHASE, 23d WARD, PHILA.

THE DISTRIBUTION OF NERVES IN REFERENCE TO NEUROTOMY.

BY HENRY C. CHAPMAN, M.D.

EVERY student of physiology will follow up with interest a case of neurotomy, both as regards its therapeutic effects, and in reference to its offering a test for our knowledge of nerve-distribution. It was with great pleasure, therefore, that I began to read an article on "Neurotomy" which appeared in the *Medical Times* for December 6. Candor compels me to admit, with great respect, however, that certain statements soon excited in me feelings of astonishment, and that I finished the article with the impression that if Dr. Mitchell was right, all the anatomists were wrong. Dr. Mitchell says, "Take, for instance, Flower's Atlas, or most of the anatomies, and you will see the median innervates this area, and the ulnar that, and so on, while in truth *this surface anatomy is a fiction*, and has to be studied anew, by closer dissections and by utilizing such nerve-sections as are made in man." As proofs of this extraordinary assertion, the doctor mentions several cases in which the radial, ulnar, and median nerves were involved. I will therefore give as brief an account as possible of the distribution of these nerves, as accepted by anatomists, and trust that the diagram, kindly furnished by Dr. Leidy, will sufficiently illustrate the subject. I will try to show, so far from the surface anatomy being a "fiction," that, not only in its general features, but in detail, it has been made out correctly for years, and that the accepted anatomy perfectly explains the phenomena which seem to have caused perplexity to Dr. Mitchell.

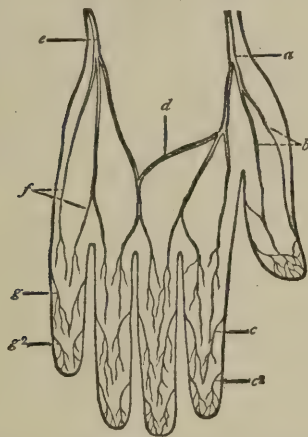
By looking at Fig. 1, we see that the back of the hand is supplied by the dorsal digitals of the radial, dorsalis ulnaris, and their anastomosing branches; the thumb and the index-finger, by a digital of the radial; the radial side of the middle finger, by a digital of the radial; the ulnar side of the ring-finger, by the digitals of the dorsalis ulnaris; while the adjacent borders of the middle and ring fingers are supplied by digitals coming from an interlacing of the radial and dorsalis ulnaris;* the little

* These nerve-filaments supplying the adjacent borders of the middle and ring fingers are subject to variation.

finger is supplied by the digitals of the dorsalis ulnaris.*

In nature these digital nerves extend through anastomotic filaments to the last phalanx; in Fig. 1, however, they are represented as terminating rather abruptly in about the middle of the finger: this has been done purposely, with the object of bringing out distinctly the important fact that the

FIG. 1.

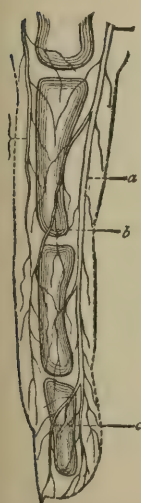


BACK OF THE HAND.—*a*, Radialis; *b*, dorsal digitals; *c* and *c2*, first and second dorsal ramus of median palmar digitals; *d*, anastomoses of radialis and dorsalis ulnaris; *e*, dorsalis ulnaris; *f*, dorsal digitals; *g* and *g2*, first and second dorsal ramus of ulnar palmar digitals.

ends of the fingers are supplied by the dorsal rami of the palmar digitals of the median and ulnar nerves, as well as by the digitals of the radialis and dorsalis ulnaris.

By looking at Fig. 2, representing the index-

FIG. 2.



SIDE VIEW OF THE INDEX FINGER.—*a*, Palmar digital; *b*, first dorsal ramus of palmar digital; *c*, second dorsal ramus of palmar digital.

dorsal ramus of the palmar digital of the median,

which anastomoses with the filaments coming from the interlacing of the radialis and dorsalis ulnaris, on its ulnar side by the dorsal ramus of the palmar digital of the ulnar, which anastomoses with the digital of the dorsalis ulnaris; the end of the little finger is supplied by the dorsal rami of the palmar digitals of the ulnaris, which anastomoses with the digitals of the dorsalis ulnaris. It is to be understood, also, that the nerves supplying the radial and ulnar borders in each finger intercommunicate through anastomotic filaments. Such is substantially the account given of the usual distribution of the radial, ulnar, and median nerves in the works of Leidy, Quain and Sharpey, Holden, Gray, Hirschfeld and Leveillé, etc., and the correctness of which, according to my knowledge, has never been questioned by an anatomist of reputation. According to Dr. Mitchell, however, there has been a conflict of opinion among the clinicians and physiologists, and "the anatomists are in part responsible for the clinical difficulty. Take, for instance, Flower's Atlas or most of the anatomies." We are surprised at any one referring to Prof. Flower's Atlas as an authority on this particular point, since it is admitted in the preface to that work "that the plates are only diagrams or plans, and that in reducing to a plane surface objects which in reality are superimposed at various distances, and which sometimes cross one another, their mutual relations and proportions must often be disarranged." While therefore the atlas of the eminent anatomist Prof. Flower may serve very well for its purpose, its plan of construction necessarily renders it almost useless in reference to the distribution of the nerves as regards a question of neurotomy. Further, in support of statements concerning the anatomy of the nervous system, it will not suffice to quote one English authority and refer vaguely to "most of the anatomies."

Any one at all conversant with scientific literature well knows that a thorough investigation of any subject demands the careful study of many authors. As regards biology, of the German writers, especially, Prof. Huxley says, "Ask the man who is investigating any question profoundly and thoroughly, be it historical, philosophical, philological, physical, literary, or theological, who is trying to make himself master of any abstract subject (except perhaps political economy and geology, both of which are intensely Anglican sciences), whether he is not compelled to read half a dozen times as many German as English books." In reference to this particular anatomical question, however, to do justice to the English anatomists, we call attention again to the excellent works of Gray, Holden, Quain and Sharpey, which are readily accessible to every American student. Imperfect knowledge of foreign languages is, therefore, no excuse for ignorance on the subject of anatomy. Supposing that our brief exposition of the nervous distribution in the hand is correct, let us now examine the phenomena noticed by Dr. Mitchell, and see if they do not entirely confirm what has long been known of the nervous system of the upper extremity. In speaking of Dr. Maury's very inter-

* To avoid confusion, the external and internal cutaneous nerves are not represented in Fig. 1.

esting case, the division of the brachial plexus for a painful cutaneous affection, Dr. Mitchell says, "At first the posterior and inner cords were cut, and the patient was allowed to become free of the effects of the ether. To my surprise, he still had touch-sense in the palm and dorsal surface of the hand, forearm, and arm, and on the inner face of the arm." I do not understand why there should have been surprise that "the palm and dorsal surface of the hand, forearm, and arm" should have retained touch-sense, so long as the external cord remained uncut, since the external cord forms part of the median and the external cutaneous, the very nerves supplying the parts which retained the touch-sense. Indeed, I should have been surprised had it been otherwise. As regards the "inner surface of the arm," the influence of the intercosto-humeral must be remembered. Dr. Mitchell says, "Sometimes the median, for example, innervates the palmar face of the thumb, the index-, and half of the second finger, sometimes extends over the whole face of the latter, and very often reaches the line given in Flower's plates, which carry it up to the middle of the face of the third finger." So far from this being "sometimes" and "very often" the case, it is almost invariably the arrangement, not only in man, but in quadrupeds, carnivora, and in pentadactyles generally. This general agreement of nerve-distribution in five-fingered animals is very important, since the wider the field of our observation the more reliable will be our conclusions.

I do not think it necessary to give a diagram of this arrangement, since it may be seen in any anatomy. In reference to the median nerve, it is an interesting fact that in man it has been observed to pass through the internal condyle of the humerus. This abnormal arrangement is quite normal in felines and some other mammals,—an illustration of the general law that what is abnormal in man is often normal in lower animals.

To continue: Dr. Mitchell, in speaking of variations, observes, "The radial nerve has been cut, and has left in one case so large a degree of feeling on the dorsal surface of the hand that neither the patient nor the physician could perceive that there was any loss at all." Is there any cause of astonishment here, when one remembers that, supposing the radial was cut, the back of the hand would still be supplied by branches of the external and internal cutaneous dorsalis ulnaris and the interosseous nerves?

According to Dr. Mitchell, "a year ago, if a surgeon had been asked to cut a nerve to relieve a local injury on the extremity of the dorsum of the index-finger, he would, without doubt, have cut the radial; and yet, as we now know, the median may have been equally or more to blame." The least I can say of such a surgeon is, that he would have been pitifully ignorant of elementary anatomy.

Once more, and I cease to tire the reader with details familiar to every anatomist. "Doubts of like nature would arise if the cause to be quarantined by nerve-section lay in the third finger, because sometimes that part is fed by the median, sometimes by the ulnar, at times by both." The

third finger is always supplied by the digital branches of the dorsal rami of the median and ulnar, the digitals of the dorsalis ulnaris, and almost always by filaments which come from the interlacing of the radialis and dorsalis ulnaris. We repeat, this last disposition of these interlacing filaments is subject to variation. Personally, I cannot understand why the phenomena noticed by Dr. Mitchell caused confusion; indeed, I must say that the perplexities of our clinical and physiological friends in reference to this subject remind me of what the celebrated metaphysician Berkeley says of his favorite study, "We have first raised a dust, and then complain we cannot see." I do not wish to leave the reader with the impression that I consider the structure of the nervous system has been exhaustively studied. On the contrary, as Prof. Henle observes in his classical work, "*Handbuch der systematischen Anatomie des Menschen*," p. 500, "Superficial physiological experience confirms the result of anatomical investigation. Modern surgical transactions have still brought to light facts upon the nerve-commissures which prove that the course of the fibres is not so simple, and our knowledge of the same is not finished. However, for our object this question may remain unsettled, for Richet's observation alone suffices to show that the fingers do not receive their sensible fibres solely from branches which extend straight to them."*

While I admit that no doubt, from time to time, there will be additions to our knowledge, I cannot endorse any such sweeping statement as "this whole surface anatomy is a fiction, and has to be studied anew." As regards learning the distribution of nerves, Dr. Mitchell seems to consider that cold, pressure, and electricity serve as means of investigation. It is with very great diffidence that I offer any criticism to these statements, as well as those above mentioned, of such an esteemed physiologist as Dr. Mitchell. I must say, however, that it appears to me, admitting the free anastomoses of nerves, that any result based on such a mode of experimentation would be very unreliable, and that inflicting pain lets in an abnormal condition, which will further vitiate, more or less, the conclusion. No subject illustrates better than the pathology of the nervous system not only the importance, but also the absolute necessity, of the thorough study of anatomy and physiology. Consider the vast amount of pathological data that remained for years almost useless on account of the healthy condition of the nervous system being so little understood. It appears to me that the medical profession, in their studies, begin where they should end: studying disease before health. In every other science the study of the normal precedes that of the abnormal,—the simple that of the complex. Why, therefore, in the most difficult of

* "Die oberflächlich physiologische Erfahrung bestätigt das Resultat der anatomischen Untersuchung. Doch haben die neuerlichen chirurgischen Behandlungen über die Nerven thatsachen zu Tage gefordert, welche beweisen das der Faserlang nicht so einfach und unsere Kenntniss desselben noch nicht abgeschlossen ist." After noticing the observations of Beclard, Paget, Schiff, Laugier, Houell, Richet, in reference to the uniting of nerves after division, Prof. Henle continues at p. 501, "Indess darf für unseren Zweck diese Frage unerledigt bleiben, da Richet's Beobachtung allein genügt um zu zeigen dass die Finger ihren sensibeln Fasern nicht lediglich aus den Aesten empfangen welche sich geraden Wegs zu ihnen erstrecken."

all studies should they use a method not found successful in the cultivation of the sciences?—in the words of one of the deepest thinkers of this century, the late Mr. Buckle, "physiology is the basis of pathology, and the laws of disease are to be raised not from the phenomena presented in disease, but from those presented in health: in other words, pathology should be investigated deductively rather than inductively; and morbid anatomy and clinical observations may verify the conclusions of science, but can never supply the means of creating the science itself."

CURIOSITIES OF COUGH.

Reported to the Medical Library and Journal Association, December 12, 1873,

BY L. ELSBERG, M.D.,

Professor of Laryngoscopy and Diseases of the Throat in the University of New York.

(Continued from page 246.)

III.—July 14, 1873.—Miss H. R., of Philadelphia, æt. 18, of healthy family, though small and delicate herself, weighing only ninety-three pounds, "got a cold in the head" during November, 1872; it lasted two or three weeks, and ended with a curious little vocal hack of a cough that has remained ever since. Except during sleep, she has this peculiar cough—if it is to be called a cough—every two or three seconds, without cessation, unless engaged in conversation or swallowing, when she can suppress it for about seven or eight seconds; it always occurs at least ten or twelve times every minute. It is an expiratory sound like the "ha" of people when they want to express derision. By its frequency breathing is quickened, as the patient always takes an inspiration, and occasionally two inspirations and one expiration, between every two coughs; otherwise nothing abnormal can be detected about the respiration. The pulse is 120, weak and nervous; temperature (taken in the mouth) 100.3°. She complains of pain in the back, especially on sitting for any length of time; and, on examination, three or four spots sensitive to slight pressure were found along the spine, the most acutely painful being in the lower lumbar region. This back-ache she has had, however, for many years before the vocal hack came on. She also has had melanotic discoloration in small spots on both her hands and feet since early childhood. She does not sleep well, waking up several times during the night. Her appetite is exceedingly poor; bowels inclined to constipation. Menstruation has always been regular and normal. There is no organic disease discernible in either lungs or heart; the upper air-passages show anæmia and some little congestion. With the laryngoscope the arytenoid cartilages are seen to approximate with a rapid spasmodic movement which marked the peculiar vocal phenomenon; and with the hand placed upon the abdomen, a synchronous jerking contraction of the diaphragm can be felt. Electrical reactions carefully investigated—with the advice, and on one occasion the personal aid, of Dr. Neftel—threw no further light upon the case. To prevent, if possible, the continuance of any possible morbid pressure, I consulted Dr. E. Banning, who applied one of his braces, which the patient continues to wear every day with great benefit to her back, but no influence upon the peculiar cough.

Although I do not intend to lengthen this recital of curious cases by detailed description of the treatment pursued, I cannot refrain from adding

that after the failure of internal medication by sedatives, antispasmodics, and narcotics, and of electricity, both faradaic and galvanic, singly and combined, applied internally and externally in various ways, this strange cough has been cured by local treatment of the slightly-congested faucial and laryngeal mucous membrane with sol. iodine and hypodermic and hypophlegmymenic injections of morphine.

(To be continued.)

TRANSLATIONS.

RENAL TUBE-CASTS IN ICTERUS.

IN the examination of a case of simple icterus catarrhalis in a young man of previous good health, Professor Nothnagel (*Deutsches Archiv für Klinische Medicin*, October, 1873) discovered in the urine a quantity of perfect casts; and as the subsequent fading of the jaundice from the skin, under an entirely expectant treatment, was attended by a diminution and final disappearance of the casts, some pathological connection between the two phenomena was naturally supposed to exist. Since that time he has investigated the subject, and from the personal examination of a large number of cases of icterus draws the following conclusion: "*Whenever the jaundice becomes comparatively intense, independently of its anatomical cause, casts appear*;" to which he adds, "*if the urine at the same time contained the biliary acids*."

Leaving out of the question cases complicated with renal disease, the fact that casts could appear in some cases of icterus is already known, but was always considered as an accidental appearance, or at the most was described as an occasional symptom of acute yellow atrophy of the liver. For instance, Bamberger does not refer to it at all. Frerichs says that "here and there a small amount of albumen would be temporarily found," but does not mention casts. Only Leyden, in comparing icterus gravis and acute hepatic atrophy with the production of the bile-acids, observes, "The urine, also, in both cases shows the same alteration: it contains albumen and casts." No one has suspected casts in other varieties of icterus.

He states that these abnormal elements can be proved to exist in icterode urine, *as a rule*, whenever the jaundice becomes intense. He therefore wishes to class this with the more constant symptoms of icterus, such as pruritus. This has escaped notice hitherto because the urine of jaundice-patients is rarely carefully examined, especially if there is no albumen present; even if it were, the casts are sometimes in such small numbers that they would escape ordinary observation.

The cases in which casts were found were principally icterus catarrhalis; also in jaundice following gall-stone colic, or consequent upon compression of the common bile-duct by a neoplasm; in pyæmia, in a case where closure of the mouth of the gall-bladder existed; and, finally, in a case of bilious pneumonia. In all of these the jaundice was of high grade, and the skin intensely yellow. The urine always gave a positive bile-pigment reaction; acid; specific gravity 1.010 to 1.020; deposited urates on cooling, and became entirely clear. In several cases, especially that of pyæmia, the presence of the biliary acids was established by Pettenkofer's test.

In the cases where casts could not be found, the icterus was slight; either it had never been of a high grade, or was already declining when the patient came under observation.

The quantity of the casts varies, in some cases being numerous, in others requiring from four to six preparations to discover two to three casts. This shows that a negative result should not lead us to form a hasty conclusion. The variation seems to be in proportion to the extent of the icterus; the more marked this, the more numerous the casts. In the great majority of cases they were hyaline, and occasionally contained a few, or sometimes numerous, small, glistening, yellow granules (fat?); or there rested upon them one or more bright-yellow epithelial cells from the tubuli, or a few white blood-cells likewise tinged with yellow. Exceptionally, these were all present. Not so frequently as the hyaline, but also not rarely, unmistakable epithelial casts appeared, consisting of closely-crowded kidney-epithelium, also stained. In most of these a hyaline base could be recognized. Only very exceptionally were casts seen to which the name "fibrinous" could be applied; these were colored, and bore, here and there, epithelial or white blood cells. There were also found large bladder-cells, leucocytes, and kidney-epithelium unconnected with the casts. An important point is noticed in reference to the casts: although the urine and all the other elements were strongly tinged with the bile-pigment, *the hyaline casts were always entirely colorless.*

In about two-thirds of the cases there was no response to the usual test for albumen. To ascertain if it was present in some modification, a quantity of the urine was largely diluted, treated with alcohol, and the precipitate incinerated on platinum; there was no swelling of the substance, but it steadily diminished under the increased temperature: the conclusion may then be adopted that no albumen whatever was present. In some cases this absence was in marked contrast with the number of casts found.

The occurrence of casts without albuminuria, although always a rare and interesting fact, has been before noticed. Griesinger and Rosenstein have reported such cases; and Key saw hyaline casts when the kidneys were entirely normal.

That when these casts occur in jaundice they are connected with it, is evident. Although no previous examinations were made, yet the manifest relation existing between the intensity of the icterus and the number of these abnormal elements, the fact that both disappeared under an indifferent treatment, the patient's (icterus catarrhalis) previous good health, the absence of albuminuria—all lead to one conclusion, and exclude the supposition of co-existing kidney-disease. A febrile origin cannot be urged in explanation, because in some cases fever was entirely wanting.

The biliary acids then suggest themselves as the exciting cause of this abnormality. How they produce the changes in the kidney or cause the appearance of the casts need not be discussed, but that they will do so may be accepted as a fact from the experiments of Leyden, who, having injected a considerable quantity of these acids into the veins in several experiments, observed albumen and casts in the urine.

That there is a direct dependence of the constant appearance of tube-casts in intense icterus upon the bile-acids is evident, but as to the details of this connection no hypothesis is ventured.

FRANK WOODBURY, M.D.

KOUMYS (*The Irish Hospital Gazette*, December 15, 1873).—An establishment has been opened near Vienna for the "koumys cure" of lung-diseases, or the treatment of such diseases by the use of mare's milk in the process of fermentation. The cases which have proved most suited to this treatment are those of chronic phthisis, when there is great wasting of the body, and

when the indication is to increase the weight and general strength of the patient. In such cases, it is said, koumys seems to work wonders, increasing the quantity of urine, lessening the night-sweats and the tendency to hæmoptysis, and changing the type of the disease from the more acute to the more chronic form. The quantity for an adult to begin with is two half-bottles per diem, increasing this dose by a half-bottle each day until the measure of three or four bottles is reached. The patient should live almost exclusively on koumys.

ALBUMINURIA AS A SYMPTOM OF MENINGITIS (*Medical Press and Circular*).—Professor Rosenstein has noticed the coincidence of albuminuria with meningitis. The analysis of their urine demonstrates in nearly all patients, whether old or young, attacked with meningitis, the presence of albumen in the early days of the cerebral affection; and in a considerable number of these cases there are found at the same time, among the products of the renal secretion, epithelial cells, blood-globules, and fibrinous casts, exactly the same as in Bright's disease. The lesions discovered by post-mortem examination of the kidneys are likewise similar to those of albuminous nephritis. The kidneys are increased in size, the hypertrophy being chiefly in the cortical substance; the renal tissue is markedly injected, the glomerulæ are gorged with blood, and there are extravasations of blood into the urinary tubules. Professor Rosenstein attributes these lesions to troubles in the circulation, due to functional alteration of the vasomotor nerve-filaments. This fact is likely to be of considerable value in diagnosis.—*Lyon Méd.*

PEPSINOMANIA (*The British Medical Journal*).—We learn from a report in the *Chemist and Druggist* that Dr. Schacht, a councillor and recently president of the Apotheker-Verein, lately read a paper on *Pepsin and Schering's Pepsin Essence*. He showed that pepsin only dissolves albumen in the presence of free acid, but that a given small quantity of pepsin will effect the solution of any given larger quantity of fibrin, on the same principle as a small quantity of sulphuric acid acting upon alcohol will continue to produce ether. Further, he showed that when the limits of its dissolving capacity are attained, yet by dilution with water and further addition of acid more solution will be effected. He also maintained that a stomach had never been found without pepsin, that the natural pepsin was never entirely destroyed by the process of digestion. From this he concluded that the administration of the artificially-obtained product could only be a work of supererogation. It is evident, also, from these premises, that the value of a pepsin cannot be estimated by the quantity of fibrin which it will dissolve, but by the time it occupies in dissolving it. Dr. Schacht's experiments also went to prove that wine or alcohol were the worst possible vehicles for the administration of pepsin. It was probable that the tannin of wine almost entirely hindered the catalytic action of the pepsin. Some experiments were shown to prove that it is much more effective if dissolved in water. Of course, in either case hydrochloric acid is necessary. Dr. Schacht chastised the "pepsinomania" in England, and referred to such preparations as Mr. Lorimer's sauce, which, however, was, he thought, preferable to the pepsin essences or wines. The speaker concluded that the administration of pepsin or any of its preparations was altogether unscientific, on the ground that no stomach had yet been observed in which the remedy was already absent.

SPONGE-TENTS (*The British Medical Journal*, November 29, 1873).—Mr. Lawson Tait believes that by soaking sponge-tents in oil of cloves they will be made more agreeable to the patients, and at the same time there will be much less risk of their causing septicæmia and peritonitis.

PHILADELPHIA

MEDICAL TIMES.

A WEEKLY JOURNAL OF

MEDICAL AND SURGICAL SCIENCE.

The Philadelphia Medical Times is an independent journal, devoted to no ends or interests whatever but those common to all who cultivate the science of medicine. Its columns are open to all those who wish to express their views on any subject coming within its legitimate sphere.

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EDITORIAL.

OUR CRIMINAL INSANE.

Governor Hartranft deserves the thanks of the friends of humanity and justice, as well as of the lovers of the fair fame of Pennsylvania, for his well-meant and cordial appeal to the Legislature in behalf of the so-called "criminal insane." We regret that he did not call their attention to a yet wider field: to the equally pressing claims of the far more numerous class of the insane poor, who are incarcerated in the poor-houses, as well as the prisons, of the State. But we cannot resist the conviction that this portion of his message was written under some misapprehension of the actual state of the case, even in respect to the particular class referred to. It is with unfeigned diffidence that we venture, and with much regret that we feel constrained, even in appearance, to controvert or criticise any of his positions. But the claims of truth and right are paramount, and we are sure that no one will be more ready than Governor Hartranft to correct any mistakes into which he may have been led by inaccurate or partial representations.

We doubt not that the State hospitals for the insane deserve much commendation, and are doing a good work for the State in many respects. But the "plea" in behalf of the insane poor of this commonwealth recently put forth by the Board of Public Charities,* and which will be embodied in

* As the "Plea" may not be seen by some of our readers, the following extracts are appended to show the importance of the subject to which we

their annual report to the Legislature, has, we think, by its array of facts, and by the concurrent testimony of the judges of our courts and the inspectors and wardens of our penitentiaries, put it beyond all question that those hospitals, and particularly that at Harrisburg, have not been accomplishing, to the extent that might reasonably be required of them, the purposes for which they were by the State designed,—the reception, care, and treatment of the insane poor. Hundreds upon hundreds of these are pining in the poor-houses and prisons of the commonwealth, while one of these hospitals has had, and still has, from one-half to two-thirds of its inmates *paying patients*. The county authorities are not invited

have to-day allotted so much space. Evidently some of the missionaries sent by our Christian philanthropists to Barbary and Algiers should be recalled for the benefit of the heathen in central Pennsylvania.

"In February last a visit was paid this almshouse, and an insane inmate was seen,—a young woman over twenty years of age, whose whole dress consisted of a thin chemise with short sleeves, a single skirt, and a pair of shoes. When brought before the visitors, a borrowed cloak was thrown over her shoulders. She was blue with cold, and utterly filthy in person. Her cell had the appearance of having undergone a recent hasty washing, but was pervaded with an odor loathsome in the extreme. On the day of this visit the thermometer fell to 14 degrees.

"In March another visit was paid to the institution by several gentlemen in a body. Only one portion of the building was visited, which is supposed to be devoted exclusively to women. In one cell was a young woman,—the one already referred to. Her cell was without any furniture whatever, her bed consisted of one blanket, her clothing a ragged chemise open to her waist, and one scanty skirt and a pair of shoes. She was indescribably unclean, and alive with vermin. Her cell reeked with a sickening odor, the result of a total absence of all conveniences for cleanliness. She shivered with cold while in the presence of her visitors; the thermometer standing, at the time, several degrees below the freezing-point.

"Opposite to the cell, which we have very faintly described, was another. The short day had already faded into dusk, and as the light was thrown through the little aperture in the door, it fell upon two wretched women, both of whom were absolutely without a single garment to cover them. One of the poor creatures sat crouching in the corner with a small blanket drawn across her shoulders, while the other was crawling on all fours on the floor, without even this poor apology for any remnant of human decency! There was not a particle of furniture in the cell; and there, on this wintry March night, in an atmosphere which the witnesses declare to have been utterly horrible, were these two human beings, brought down far below the level of our domestic brutes.

* * * * *

"Insane totally neglected, morally, physically, and medically; less attention is given to them than would be given to the lowest animals; four are incapable of self-care, confined in filthy cells; one, a female, has great neighborhood notoriety from sad incidents connected with her history. Known as an intelligent, esteemed, and attractive young lady, the daughter of a well-known inhabitant of the neighborhood, she fell a victim to the arts of the seducer. Insanity is alleged to have been caused by her disappointment. This occurred twenty-one years ago. The sad case is rendered still more painful by her present forlorn condition. A bed of straw, upon a damp, dirty floor, into which the external light can find no entrance, is the only furniture. A seat, a chair or a bench, has apparently never been furnished; the consequence of which is that the muscles of the lower extremities, from the cramped position in which she was always found, have become permanently contracted, so that the only movement of which she is capable is one similar to that of a frog.

* * * * *

"Twenty-two insane; twelve are kept in close confinement, some in chains; one always chained to the ceiling to prevent him from tearing his clothes; some entirely nude; at least six with straw litters; not one of the twelve was ever removed into the open air. All confined in apartments opposite each other, a narrow corridor extending between them. The effect of this close proximity was to make the day and night hideous with the distressing shrieks and yells of the wretched and maltreated madmen."

and encouraged to send their insane to the hospital, except a few of the more recent cases. Indeed, it is understood, as we are informed, that the hospital at Harrisburg will receive no cases from the county authorities if they have had the malady beyond six months. The judges of the courts are deterred and debarred from sending those acquitted of crime on the ground of insanity, especially those of the more dangerous class, or those acquitted upon the charge of the graver offences, or whose disease is not "speedily curable," because the hospitals are already crowded (crowded, observe, chiefly with "paying patients"), and because the hospital authorities can summarily remand any of the less curable cases to prison. The fact is that the anomalous power just referred to, given to the hospital authorities by the law of 1861, has resulted in defeating, to a very large extent, the wise and beneficial purposes and provisions of the law of 1845, under which the first State lunatic hospital was established,—established for the very ends and objects which appear to have been disregarded in its administration. We make these statements with sincere reluctance, and not because we have any emotion of unkindness towards any individual connected with its management. On the contrary, we are quite sure that the medical superintendent is an amiable and estimable gentleman, and a skilful physician in his chosen department of medicine, and we know that the trustees are highly honorable and conscientious; but we make them because we feel keenly the grievous wrongs of the poor, helpless unfortunates, in whose behalf we would join in the earnest memorials of the judges of the courts and other eminent citizens, lay and professional.

The "plea" of the Board of Public Charities is a document of considerable length, and has just been issued from the press. We presume that Governor Hartranft had not read it when his message was prepared. We think that no one can read it with candid consideration without being convinced that the system of management of our State hospitals for the insane, in respect to the reception and retention of patients, and the provisions of our laws for the care and treatment of this class of sufferers in general, require to be thoroughly revised and reformed.

As to the memorial of the committee of the Medical Society of Pennsylvania, signed by the chairman, the superintendent of the Harrisburg lunatic hospital, one is not surprised, considering the respectable source from which it emanates, that Governor Hartranft should have presumed it to be worthy of unhesitating confidence and consideration, and should have been led to a quasi-adoption

of its suggestions without a careful scrutiny of their bearing and character. But we trust that, before acting upon the subject, the Legislature, as well as the Executive, will give this "Memorial" a thorough scanning and analysis.

It proposes, at the outset,—and so Governor Hartranft apparently understood it,—to consider the *general case* of the "Criminal Insane;" and yet it makes at last the lame and impotent conclusion of a mere suggestion of legislative provision for the better care and treatment of only a small fraction of these: viz., "insane convicts," endorsing, with respect to this comparatively insignificant portion, the resolutions adopted by the Association of Medical Superintendents at Baltimore. This is the only action, the only legislative reform, it proposes. But as the laws of this State, and the practice under them, now stand, the claims of insane convicts to relief, as compared with those of other classes of "insane criminals," so called,—whether we consider their respective numbers or the hardship or injustice of their present treatment,—are as nothing. It is not the score or so of insane convicts, but it is the multitude of those who, in a state of insanity, have committed, or are liable to commit, what are called crimes, but who are morally irresponsible for their acts,—it is these who are suffering unspeakable wrong, and whose wretched condition demands the immediate attention of the Legislature. The "Memorial" declares that for these last "the law provides full and adequate means of relief; that they shall be placed in hospitals built and arranged for their care and treatment until they should be restored to their sound minds." It then coolly assumes that these "means" are effectual, that all this class are actually thus taken care of; and it proposes no legislation, no measure of enlargement or improvement of the "full and adequate means of relief" thus provided for them. Would not every unguarded and simple reader of this "Memorial," considering, as we have said, the respectable source from which it comes, presume that all this class of insane among us were duly cared for in our State hospitals? Would he believe, would he imagine it possible, that there should be at this moment, in the commonwealth of Pennsylvania, numbers of this class of irresponsible "insane criminals" raving and rotting in the cells of our prisons and the dungeons of our poor-houses, and that our criminal judges and magistrates should feel obliged from day to day to commit such helpless sufferers to a hopeless incarceration in such abodes of misery? Yet such is the fact; and it is one of the foulest blots upon the honor of our State. Does any one doubt it?

Let him read the "plea" of the Board of Public Charities, and his doubts will be removed.

And now, whose fault is it? Is it the fault of the judges? Is it the fault of the hospitals? Is it the fault of the law? One of these, it would seem, it must be, if there is any fault at all. As to the judges, read their statement and memorial, contained in the "plea," and no doubt they will be exonerated. The fault, then, must be either with the hospitals or with the law, and then, in either case, it comes back upon the hospital authorities; for the present state of the laws upon which the evil might be charged has been brought about by their procurement; and they have never asked any amendment of the law in this regard, but rather have obstructed any such amendment; just as this "Memorial," which betrays the inspiration of a hospital superintendent, makes not the slightest suggestion of any change of the law in relation to this subject, but expressly declares its provisions to be "full and adequate for the relief" of this class of lunatics. We leave to others to characterize as it deserves a "Memorial" professedly put forth in the interest of humanity and in behalf of this particular class of sufferers, but which coolly abandons the helpless and innocent to their present fate, under the "full and adequate provisions" of the law,—a fate and a law which some of its authors have had a principal hand in securing,—and then covering its retreat with a lame suggestion of some doubtful relief for a dozen or two of "insane convicts." But meanwhile it cannot be too emphatically asserted and insisted on that, next to adequate provision for the "insane poor" in general, the great point to be urged upon the attention of the Legislature is, not the case of "insane convicts," but that of those innocent lunatics who, by an abuse of words rather singular, though easily explained, are commonly called "*the criminal insane*."

We follow this "Memorial" to another point, of less importance. Although, in the end, it seems obliged to admit that some relief should be provided for "insane convicts," it takes pains to blacken their character as much as possible on the way, and to arouse as strong a prejudice as possible against their claims. Even the horrible doctrine that insanity may be regarded as a part of their penalty is coolly endorsed. "They have every reason"—such are its words—"to look upon the insanity as a part of the penalty which their crimes have brought upon them, and cannot complain if society should so regard it and act accordingly." But by whose sentence or act is the penalty inflicted? What does the "Memorial"

take society to be composed of? of fatalists or savages? It may be true that the poor lunatics, who receive from the hand of Providence no more than a just punishment for their crimes, have no right to complain if society regards and treats them accordingly; but reason, justice, humanity, decency, have a right to complain, and to set the seal of their emphatic condemnation on such an infamous, not to say blasphemous, suggestion,—a suggestion which, so far as it possesses any plausibility, has been anticipated, analyzed, and demolished in the "plea" of the Board of Public Charities.

Having described, and very properly described, the first class of so-called "insane criminals," the irresponsible or innocent class, the "Memorial" adds, "The other class consists of those who, having led a life of crime, having been at war with society all their lives, and being in constant violation of the laws of God and man, are at some point in their career arrested by the strong arm of the law and confined in prison. After a time they may become insane, and need care and treatment." Between these two classes it recognizes no gradation, no intermediate cases: all "insane convicts" are regarded as coming under this last description. Now, that there may be some of this character is not to be denied. But that, even of "insane convicts" as a class, it is a false and slanderous description, must be evident to any one who will read the reports of the inspectors and wardens of penitentiaries which are given in the "plea" of the Board of Public Charities. They show that by far the largest proportion of even "insane convicts" were probably insane before the commission of the acts and crimes for which they were convicted; and of the rest it is far from being true that, as a rule, it is the worst and most hardened criminals that are the most likely to become insane. As to their demeanor while under confinement or treatment, the testimony of those in charge of them is surprisingly to their advantage.

Dr. Compton, Superintendent of the State Lunatic Asylum of Mississippi, says, "My own experience with insane criminals" (the connection shows that he means "convicts") "leads me to feel rather charitably towards them."

Dr. Shaw, Superintendent of the General Hospital for the Insane, Middletown, Connecticut, says, "In practical experience, I have not found that 'insane convicts' are particularly objectionable in themselves. . . . Twelve insane convicts have been transferred from Wethersfield to Middletown; two of that number escaped, one of them having feigned insanity. Of the ten others, seven have been among

the most valuable farm-laborers,—harmless, industrious, and peaceable, and yet positively insane. They are generally liked by the patients, and are not more troublesome than others."

Dr. Earle, of Northampton, Massachusetts, says, "I would put the 'convict insane' in a separate institution, independent of all other institutions. I would *put in the same place* those who have been tried and acquitted of crime on the ground of insanity; then those incendiary and homicidal patients who never have been tried for crime. . . . Our most dangerous patients *are not convicts*, and have never been tried and acquitted of crime on the ground of insanity."

But, at all events (the "Memorial" urges), insane convicts are too bad to have a department provided for them in connection with any general hospital, because, in the first place, they will escape; for most of those who were sent to the Harrisburg hospital some years since soon made their escape.

It is true that, for some reason or other, they did manage to escape from the Harrisburg hospital. But have they escaped from the Dixmont hospital? Have they escaped from the Connecticut hospital? Have they escaped from the Mississippi, the Maine, or the Massachusetts hospitals? If really insane, it is not easy to see how they could make their escape permanently good, or, if they did, what great harm there would be in it; for apparently they must, in that case, be practically cured of their insanity, so as not to be capable of identification as insane persons. But, as a general rule, *they have not escaped*. The case at Harrisburg does not make the rule. Why they should be more likely to escape from the Harrisburg hospital than from any other, we leave for others to answer. If the prisoners escape through neglect of the keepers, the fact of the escape is not a good plea. It is a sound principle of reason that no man can plead his own wrong in support of his cause.

But, in the second place, it is urged that it is a hardship upon the other inmates of the hospital to admit "insane convicts" into association with them. The simple answer is, they might be admitted to a special and separate department in the hospital, without any such association; and this is really all that has been proposed.

In the third place, it is alleged that when "insane convicts have been admitted to general State hospitals it has been against the protest of the superintendents." Sometimes this has been so, and naturally enough; but it is by no means universally true. Dr. Compton, of Mississippi, in expressing his decided opposition to the doctrine that "under no

circumstances should 'insane convicts' be permitted to associate with other insane persons," added, with emphatic earnestness, "I would take them into my asylum rather than let them remain in the penitentiary or jail. In the absence of the proper provisions, I would take them out of the penitentiaries and jails and put them in my asylum." And such we understand to have been the almost universal sentiment of the superintendents of insane asylums in their late session at Baltimore, with the exception of some of those from Pennsylvania. An entirely separate provision for "insane convicts" was undoubtedly preferred as the best,—the ideal plan,—where such an establishment could be afforded; but, unhesitatingly, they would welcome these unfortunates to their asylums, rather than have them left incarcerated in prisons. In Pennsylvania almost alone have they been left to this hard fate; and here they have been so left because the State hospital "refused to receive them." "I would take them into my asylum," says Dr. Compton. "Let them rot in prison first," has been the voice from Harrisburg.

In the fourth place, it is alleged that New York has established a special hospital for "insane convicts," *on prison grounds*. Yes, but then most of the other classes of the "criminal insane"—the innocent and irresponsible—are consigned to the same hospital,—consigned to a prison-hospital,—a course contrary to all generous and humane sentiments, contrary to the strongly-expressed convictions of an apparent majority of the medical superintendents of Baltimore, contrary, even, to the suggestions of the "Memorial" itself; for, in the end, it concludes with a mere endorsement and reproduction of the resolutions of that convention, from which all approbation of the New York plan had been carefully eliminated. But it is not likely that New York would establish and support a separate hospital, with such full provision as is made for that at Auburn, simply and exclusively for her "insane convicts;" and that is what this "Memorial" seems to propose that Pennsylvania should do.

Finally, it is alleged that such separate hospitals have been established in Great Britain and Ireland. But there the number of "insane convicts" (being in some proportion to the population) is so great as to authorize the establishment of entirely separate hospitals for their treatment; and this would unquestionably be the best course for us if the State could reasonably afford it. Our "insane convicts" ought by all means to have provision made for their proper care and treatment. But, while the number is so small, we think the Board of Public Charities

has demonstrated that the cheapest, most feasible, and withal most reasonable and appropriate, arrangement for the State, is to provide, in the first place, a special department in connection with one of the State hospitals for the "criminal insane," so called, who are now languishing in our prisons and poor-houses; and then, with proper arrangements for such a degree of personal separation as may be thought best, to admit temporarily to this department "insane convicts" also, for treatment *while they remain insane*; temporarily, we say,—*i.e.*, until it is thought that the State should incur the expense of a fully-appointed hospital for their exclusive accommodation.

But if the proposed special hospital is to be placed on prison grounds,—to be made a department of a penitentiary,—then must we protest against sending to it the other classes of the "criminal insane," the innocent and irresponsible, who have never been tried for any crime, or, if tried, have been acquitted. We protest in their own name, in the name of their friends, in the name of the whole community, and in the name of reason and humanity itself. What we demand of the Legislature is that, first of all, for these the law should make "full and adequate provision" in a real and practical, and not a Pickwickian, sense,—a sense very different from that of this "Memorial,"—a sense which will not leave them, as that does, in the cells of our prisons and poor-houses, to languish out a hopeless existence of unspeakable and inconceivable horror. We would not have the "insane convicts" neglected—far from it; but we say again, it is for this other class, and not for "insane convicts" proper, that relief is first of all demanded of the Legislature.

And even if a special hospital for "insane convicts" exclusively be thought advisable, we see no reason in the world why it should be placed upon prison grounds rather than elsewhere, unless the State is to incur the expense of such a hospital for each and every prison; and if this is what is intended and proposed by the "Memorial," it does not appear that, after all, it would be a great improvement upon the present state of things. It might be some alleviation.

But again and again we implore the Legislature not to forget that other and far greater suffering class of the innocent victims of the law who are abusively called the "criminal insane;" and still less the yet larger class of the wretched *insane poor*,—now, with a grim mockery of humanity, consigned for safe-keeping to the poor-houses and prisons of the State.

CORRESPONDENCE.

TO THE EDITOR OF THE PHILADELPHIA MEDICAL TIMES:

IN two numbers of your journal you have held up to professional condemnation the practice which has prevailed of having the names of the surgeons and physicians elected to the hospitals published in the newspapers. You aver that this gives to those gentlemen a great advantage over other medical men of equal skill and ability. This may be true; and yet I can hardly think the physicians and surgeons alluded to can be blamed for being thus announced at the time of election. Indeed, they could not easily prevent the ubiquitous reporter from publishing it. It is an item of news that belongs to him. But if after this first announcement it should be again published, either by themselves or by the managers with their consent or even their silent acquiescence, it would be advertising their skill, and would deserve your sharp and just criticism. If those gentlemen regard themselves as being in the first rank of medical men, it is incumbent on them to show an honorable example to those who occupy less prominent positions and yet are subject to the same code of ethics. As you have opened this subject, allow me to improve the opportunity to call attention to doings which I consider even more objectionable, committed thoughtlessly, no doubt, by prominent medical men of Philadelphia, for whom I have the highest respect,—men of unimpeached honor, incapable of meanness or trickery in the profession. I am, to speak frankly, glad of this opportunity, because it has been my fortune during the last three years to see two skilful and intelligent physicians in the interior of the State expelled from their society, and subjected to disgrace and pecuniary loss, for violations of the code of medical ethics less grave than those which I shall present.

In the early part of last summer, when your citizens were preparing to go to sea-side resorts, there appeared in the daily papers a letter from a prominent physician of Philadelphia, purporting to be the answer to an inquiry addressed to him by the proprietor of a large boarding-house at Atlantic City, in relation to the merits of that place as a residence for invalids or seekers after health. In this answer the physician alluded to gave at great length a glowing account of the great advantages, in a sanitary point of view, of that locality over all others on the New Jersey coast. I have not now the paper before me, and cannot enter into details. Suffice it to say that the article was extensively copied by other newspapers, with the name of the physician, and name of street and number of residence, and that the letter became the theme of conversation among those who contemplated a visit to the sea-shore, and the very important information which it was believed to contain was hailed by them as a true "God-send." Many turned their steps towards Atlantic City who had before preferred other resorts. I was impressed with the impropriety of the letter on first seeing it; but how was

that impression deepened when I afterwards learned that its author was during *the season* located there as a physician! Could any mode of advertising one's self be more efficient? I do not wish to speak harshly of it; my object is only to present it to the profession as a violation of the spirit, if not of the letter, of the code of medical ethics.

Again, during last summer, the Obstetrical Society of Philadelphia, feeling the importance of disseminating information among the masses in relation to the proper mode of caring for young children during the warm summer months, appointed a committee to draw up "rules" to guide parents and nurses in the management of infants and young children. The committee, composed of six of their number,—men who had had long experience in the treatment of children,—published for distribution ten thousand copies of those, in many respects, admirable rules, and threw them broadcast over the city. But I was grieved to see that their names were appended to the rules. I exonerate every one of them from any intention to gather advantage to himself from the act, but I ask what would be the probable effect of such a proceeding? Would not every anxious mother whose child should show symptoms of indigestion or of cholera infantum say, "One of those gentlemen of the committee would be the proper person to call to my sick child; they are *the* physicians of the Society, specially chosen to issue the address on account of their great experience in the treatment of the diseases of children; and especially those diseases which, from their known fatality, bring sorrow to thousands of homes"? Hundreds who perhaps had never before heard of some of them would thus be impressed with their superiority over all others, and would be inclined to seek their aid in those affections. Would not the rules have been as much respected, would they not have been as authoritative, if signed by "The Committee of the Obstetrical Society," or by its Secretary, as by those gentlemen? I think it was a bad precedent, and has already been productive of evil results. Cannot any physician say, If they can publish "rules," and send them all over the city with their names appended, why cannot I do it? And already we find that a committee is dispensed with, and a single physician issues "directions for the management of infants during the warm weather," signed by his name with title added. And those directions—very objectionable ones too, some of them—are sent broadcast after those of the committee. Surely this is quite as reprehensible as that you charge against the surgical and medical staff of the hospital. If you may publish "directions" or "rules" for treating "summer-complaint" and other diseases of *warm* weather, may not I publish my skill or knowledge in relation to pleurisy, pneumonia, and croup, and other diseases of *cold* weather?—ending with the pleasant and cheering advice, "If you are sick, send at once for a physician"? "And who knows more about the diseases of cold weather than the author of the directions?" would at once suggest itself to the sick man or his family. Were

we to see papers such as I have noticed published by a committee of a homœopathic society, or by an individual of that faith, we should regard it as quite unprofessional, however innocent they might have been of any but the most philanthropic motives. It is most commendable to instruct the community in the art of health; but, in doing it, let it be done for the public good and in the interests of humanity alone.

I hope this article will give no offence to those to whom it refers. My desire is that we of the State shall have a proper example set us by those who so well know the letter and spirit of the code of medical ethics.

HIRAM CORSON.

PROCEEDINGS OF SOCIETIES.

BIOLOGICAL AND MICROSCOPICAL SECTION OF THE ACADEMY OF NATURAL SCIENCES.

JANUARY 5, 1874.

DIRECTOR W. S. W. RUSCHENBERGER, M.D., in the chair.

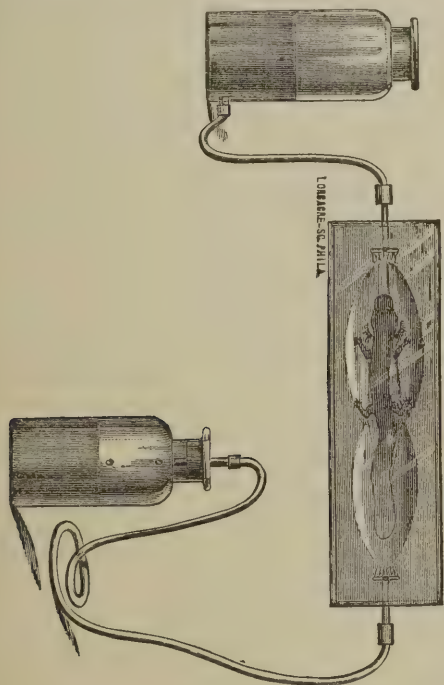
MR. HOLMAN'S "siphon slide" for the microscope was exhibited in operation by Dr. Joseph G. Richardson, who remarked that the apparatus was composed essentially of a strip of plate-glass, of the ordinary length and width (namely, three inches long by one inch wide), but double the usual thickness, in the upper surface of which had been ground a shallow groove, elliptical in both its transverse and longitudinal section, and deeper towards one extremity. The excavation was so arranged as to receive a small fish, tadpole, or triton, and retain it without, on the one hand, injury from undue pressure, but without, on the other, permitting any troublesome gymnastics beneath the thin glass cover, which, when applied, formed the ceiling of the cell. The great improvement of this slide consisted, however, in the imbedding of a small metallic tube (communicating with each extremity of the groove) in either end of the slide, and the adaptation to these two tubes of pieces of slender caoutchouc pipe, about eighteen inches in length, one of these being intended for the entrance and the other for the exit of any fluid, *cold* or *hot*, which it might be desirable to employ.

For examination of larger reptiles, and for demonstrations with the gas-microscope, a slide four inches long, with two oval concavities, and a narrow groove more deeply cut for the body of the creature, as shown in the figure, has been devised. With such an apparatus, through which a current of ice-water can be passed, the injurious heating effect which ordinarily attends the use of calcium or electric light to illuminate living specimens is entirely counteracted.

When in use, it is only necessary to place the animal (in the case before us a little triton) with some water in the groove of the slide, cover him with a sheet of thin glass, immerse the end of one of the caoutchouc tubes in a jar of water, and then, applying the mouth to the extremity of the other rubber pipe, make sufficient suction to set up a flow of the liquid through the apparatus. The stream of fluid (of course bathing the animal in the cell during its passage) can readily be kept up, as in any other siphon, for hours or days, and its rapidity exactly regulated by graduated pressure upon the entrance-pipe, so that in this way a triton may be examined continuously (as stated by Dr. J. Gibbons Hunt,

who had kindly furnished and prepared the slide and specimen) for a whole week without material injury.

Among the great advantages of this very ingenious contrivance may be enumerated—first, its security,—the animal being prevented from escaping, and the joints of the apparatus being kept tightly closed by the pressure of the atmosphere; second, its portability,—the whole preparation, for example, one for showing the circulation of the blood, being made at home,—as was done in this instance,—carried to a lecture-room in the pocket, and exhibited to an audience hours afterwards; and third, its convenience,—this arrangement permitting the removal of the slide at any time from the microscope-stage, to make way for other experiments, and its instant readjustment when desired.



Dr. RICHARDSON invited the attention of members to the remarkably clear and distinct view of the circulation displayed by the aid of this apparatus in the caudal extremity of a triton, beneath one of the microscopes upon the table, and pointed out as especially worthy of note the marked prominence of nuclei in epithelial cells covering a portion of the tail, where blood-stasis had occurred, in consequence of a minute puncture purposely made before incarcerating the reptile; suggesting that this change was doubtless the visible exponent of that pathological alteration of the circumjacent cellular elements which constitutes such an important, although as yet but imperfectly understood, factor in the inflammatory process.

GLEANINGS FROM OUR EXCHANGES.

TREATMENT OF LUMBAGO (*The Lancet*, December 27, 1873).—Dr. G. V. Poore reports the case of a man, æt. 35, who had the following history:

He had been accustomed to lathe-work, moving the treadle with his right foot, but had been unable to work for six years on account of a pain at first affecting the backs of the thighs and hips, but afterwards settling in

the lower dorsal and lumbar regions. It was of a plunging, shooting character, much aggravated by the slightest movement, or even by the most gentle touch; he was bent almost double, and walked with the greatest difficulty. The intercostal muscles on both sides were affected, but there was no sign of any disease of the vertebræ or of the cord, and no particularly tender points were detected along the spinal column. He had been subjected to a great variety of treatments, but without any permanent relief having been afforded him.

The positive pole of a zinc-carbon battery was placed at the upper part of the spinal column in the median line, and the whole back, including the intercostal muscles, was sponged with the negative pole. During the application the patient was made to exercise his muscles rhythmically by bending, extending, and rotating the spine, and by frequent inspiration. The effects of this treatment were apparent from the first: the pain was immediately and greatly diminished, if not abolished, and in a short time all the extreme symptoms disappeared.

The important point was apparently the rhythmical exercise of the muscles, which improved their nutrition; but without the anodyne application of the galvanism such exercise would have been impossible.

RESUSCITATION FROM CHLOROFORM-NARCOSIS (*The New Orleans Medical and Surgical Journal*, November, 1873).—In the course of an extended experience in the administration of chloroform, it has happened three times to Dr. M. Schuppert that, to all appearances, the narcotized subject died,—that is, respiration ceased, the heart stopped beating, and muscular contractility became extinct. The method he adopted for resuscitating these patients consisted in reversing the body, either by hanging them up by the feet or laying them over a bed or table so that the greater part of the body with the head hung down. In that position artificial respiration was also tried. In one case five minutes elapsed before there was a natural inhalation. All of them recovered. Dr. Schuppert believes that in cases of death from chloroform the primary cause of the cessation of the respiration and circulation rests in anæmia of the brain, and not in impregnation of the blood with carbonic acid.

ACETIC ACID IN PSORIASIS (*New York Medical Journal*, January, 1874).—Dr. Buck, of Lübeck, says that by ordinary methods of treating psoriasis the eruption may be temporarily removed without difficulty, but no protection from relapses is afforded. He believes that in nearly all chronic cutaneous eruptions, and especially in psoriasis, an etiological treatment is impossible, and a permanent result is promised only by a consistent external treatment. He has obtained the best results from the use of acetic acid. After the epidermal growths have been softened and loosened by several warm baths and soap, the glistening scales are removed with a soft brush. At first a few points of the eruption are to be pencilled once a day, and this is to be repeated until the skin remains smooth and feels normal to the touch. There are never any scars left. The treatment lasts from four to six or eight weeks, and, properly carried out, is not followed by relapses.

PARACENTESIS THORACIS (*The Practitioner*, December, 1873).—Dr. Sydney Ringer publishes his notes on five cases of paracentesis thoracis, showing by them how slight a disturbance this operation causes and what immense relief it affords; showing also that the operation may be usefully employed in the febrile and non-febrile stages of pleurisy with effusion, and that during fever the fluid may be withdrawn by the aspirator and not accumulate again. In some cases of empyema it is suf-

ficient to withdraw part of the fluid by the aspirator,—the rest may disappear; so that it is not always necessary to lay open the chest in order that the pus may drain entirely away. In severe empyema the temperature may be normal, or scarcely at all raised; and in those cases accompanied by chronic fever the pus may be perfectly sweet.

CHOLESTERÆMIA (*The Medical Record*, December 1, 1873).—In a paper read before the New York Academy of Medicine, Prof. Austin Flint, Jr., discussed the condition which has been called cholesteræmia, and concluded that cholesterine is an excrementitious substance, produced chiefly by disassimilation or physiological wear of brain and nervous tissue; that it is taken up by the blood and carried to a special organ for its elimination, and that that organ is the liver. In the liver it is separated from the blood, and finds its way into the bile discharged into the small intestines, and is there changed into stercorine, which is discharged from the body at about the rate of ten grains each twenty-four hours. In certain cases of disease of the liver, accompanied by grave nervous symptoms, there is an accumulation of the cholesterine in the blood, giving rise to cholesteræmia.

MISCELLANY.

THE NEW HOTEL-DIEU.—An order in due form of law has been served upon the contractors for the construction of the new Hôtel-Dieu, to summon them to recommence work, which has been suspended for some time.—(*Various Journals*.)

We would prefer that the ridiculous edifice known as the Hôtel-Dieu should be utilized, whether for a post-office or for the administration of some other branch of public business. It is only necessary to visit the squat and crowded buildings, lacking both light and air, to be convinced that they will never make a good hospital.—*Le Progrès Médical*, December 13, 1873.

NEW FOSSIL MAN.—In the *Revue Scientifique* for December it is stated that a third skeleton of a troglodyte has been discovered by M. Rivière in the caves of Mentone. This new skeleton, judging from the various and numerous implements by which it was surrounded, lived at an epoch far more remote than that assigned to the skeleton now in the Museum of Paris. The instruments of warfare and other objects found with it, though composed of flint and bone, are not polished. They are only sharpened, and by their coarse execution appear to belong to the palæo-lithic age. On the upper part of the skeleton was a large number of small shells, each pierced with a hole, which appeared to have formed a collar or bracelets. No pottery nor any bronze object was found.—*London Lancet*.

REMOVAL OF GLASS STOPPERS.—It may not have occurred to every one—at all events, it is not noticed in any of our treatises on practical pharmacy—that the easiest way to take out a stopper which has become fixed in the neck of a bottle is to reverse the motion given to it when putting it in, that is, to knock the stopper from *right to left*. In most instances, when a stopper is fixed without the intervention of an adhesive substance, it is by turning it as one would drive a screw.

The direction is almost invariably from left to right, and thus a thread is formed, which it is easier to follow backwards than to break.—*Canada Medical Record*.

GLYCEROLE FOR CHAPPING OF THE SKIN.—

R Oxide of zinc, gr. xx;
Tannic acid, gr. xv;
Glycerin, ʒix;
Tincture of benzoin, ʒss;
Camphor, gr. xv.—M.

—*Canada Medical Record*.

It is stated that the total export of coffee from the island of Ceylon in the year 1837 was 30,000 cwts., valued at less than 100,000*l*. In 1870 the export was over 1,000,000 cwts., equivalent to fully three and a half millions of pounds sterling in the consuming markets.—*Food Journal*.

UNIVERSITY OF NEW YORK—MEDICAL DEPARTMENT.—Professor Henry Draper having resigned the Chair of Physiology in the University of the City of New York, Professor J. W. S. Arnold will lecture on that subject during the remainder of this session.

HEADACHE.—Dr. C. C. Vanderbeck recommends the use of ergot in headache; thirty drops of the tincture every half-hour until relief is obtained. He regards it as a very useful remedy, though not a specific.—*Boston Medical and Surgical Journal*.

NOTES AND QUERIES.

UNIONTOWN, PENNA., January 9, 1874.

TO THE EDITOR OF THE PHILADELPHIA MEDICAL TIMES:

SIR,—Biddle's *Materia Medica* (p. 294) gives the symbol for calomel as one equivalent of chlorine and mercury each, and says it is a protochloride of mercury; while Rand's *Chemistry* (p. 277) teaches me that corrosive sublimate is equal parts of chlorine and mercury, and that it is a protochloride.

By telling me, through your columns, which of the above is correct, you will much oblige

A MEDICAL STUDENT.

Answer.

THE difference in your authorities is due to the fact that the equivalent of mercury is sometimes considered as 100 and sometimes as 200. Although there are many arguments in favor of the smaller number, the latter has been more generally employed.

According to the new nomenclature, which makes the combining weight of mercury 200, calomel is the protochloride, and corrosive sublimate the bichloride.—Ed.

PHILADELPHIA COUNTY MEDICAL SOCIETY.

THE next conversational meeting will be held Wednesday, January 28, 1874, at 8 o'clock P.M.

Dr. William Goodell will make remarks on the rapid dilatation of the womb for the treatment of some uterine affections.

All regular practitioners of medicine are cordially invited.

OFFICIAL LIST

OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U.S. ARMY, FROM JANUARY 13, 1874, TO JANUARY 19, 1874, INCLUSIVE.

CAMPBELL, A. B., ASSISTANT-SURGEON.—Assigned to duty at Fort Clark, Texas. S. O. 4, Department of Texas, January 8, 1874.

SATURDAY, JANUARY 31, 1874.

ORIGINAL COMMUNICATIONS.

SPINAL CONGESTION AND LOCOMOTOR ATAXIA.

BY GEORGE M. BEARD, M.D.

(Concluded from page 259.)

IN regard to posterior spinal sclerosis, to which spinal congestion sometimes leads, I have these remarks to offer:

1. The great exciting causes of the disease are exposure to wet and cold, mechanical injury, and syphilis. It is a fact not thoroughly appreciated by the profession or by the people, that it is as possible to take cold in the cord as in the lungs. Those who sit for a long time on the cold, damp ground, or ride all day in an open buggy, or sleep in a draft of air, or suddenly leave off in cold weather the underclothing, or sit for hours with wet or even damp feet, and in chilly rooms, or work all day exposed to showers and biting winds, or lie down to rest in wet garments, render themselves liable to take cold in the spinal cord. Cold in the cord manifests itself just as cold anywhere else manifests itself,—that is, by congestion; and if the colds are repeated, the congestion becomes a fixed condition that is not easily resolved, and in time may go on to the condition known as posterior spinal sclerosis, or locomotor ataxia.

The connection between this structural lesion of the cord and exposure to wet and cold is not always directly apparent, is but rarely suspected by the patient, and almost never inquired into by the physician, partly because of its remoteness, and partly because the professional mind, at least, has been diverted in the direction of sexual excess as the one great cause of ataxia. The connection is remote because a long time, usually months and years, intervenes between the exposure that gave rise to spinal congestion and the sclerosis of the posterior column to which neglected and repeated congestions lead. In the case of the cold on the lungs or bronchial tubes, the bad effects follow speedily, and some of the symptoms are tolerably well recognized even among the laity. A cold in the cord manifests itself by symptoms of which the people know little or nothing, and to which the great body of the profession has given but fragmentary attention. It is oftentimes only by close and careful questionings, repeated at different visits, that we are able to trace the relation between ataxia and congestion resulting from cold.

The mechanical injuries that most frequently give rise to sclerosis of the cord are severe blows and falls, or the shock of accidents of almost any kind. It is not necessary that the injury, whatever it may be, should be received on the spine or head, in order to cause symptoms of ataxia. A violent concussion from any injury that is directly felt on the arms or legs may have the same effect as a direct injury to the back. A mechanical injury may cause

chronic inflammation of the cord that may attack either the posterior column alone, or both the posterior and anterior columns. There is sometimes a loss of both sensation and motion, showing that the cord is involved through its whole diameter; as in the case of taking cold in the cord, the ataxy-symptoms may not follow the injury until after several weeks or months. In a case of ataxy,—a medical man who was under my care, and for whom I testified in court,—there was indubitable evidence that the disease was the direct effect of an injury from falling while attempting to get on a horse-car; but the ataxy-symptoms did not appear at once, and were not even suspected by the patient at the time the suit was commenced, and hence much less damages were claimed than would have been claimed had it been known that he was to suffer from so grave a disease of the cord.

2. The cord is predisposed to take cold by any causes that tend to exhaust it. Among the more prominent of these causes are long marching or violent and wearying muscular exertion of any kind, especially of the sort that draws heavily on the lower part of the cord, excessive intellectual exertion, and sexual excesses. The two latter predisposing causes, excessive intellectual exertion and sexual excesses, operate far less frequently than the purely physical causes. It is muscular more than mental over-exertion that produces that peculiar kind of weakness of the cord that invites congestion and inflammation with degeneration. It is not so much among brain-workers as among muscle-workers, not so much among the delicate, the finely organized and sensitive, as among the coarse, the hardy, and the comparatively tough-fibred classes, that we meet with the most cases of ataxia. It is a disease not of the weak, but of the strong. It is notoriously unfrequent among females,—and females, in modern days at least, are far more delicate than males. The majority of the cases, I am disposed to believe, are those who are, or have been, more or less exposed, whose labors are largely, if not entirely, physical, or who, if they live by brain-work, have been at some time or in some way considerably exposed. If two persons of the same age, both of fair constitution, were subjected to precisely the same mechanical injury, I should expect that the one with the coarser temperament would be more likely to develop the symptoms of sclerosis of the cord. Patients of either sex who are specially nervous or hysterical are not liable to structural lesions of the cord. A kind of antagonism, indeed, seems to exist between the distinctively nervous temperament, the *anæmic* condition of the system, and chronic inflammations of the central nervous system of any form; and when such pathological states do arise in these nervous people, the prognosis seems to be better, and they yield more kindly to treatment, than when they arise in those of a stronger and coarser type.

In regard to the supposed influence of sexual excesses on this disease, the profession must revise its opinion. That sexual excesses constitute an important factor in the causation of nervous diseases must be admitted, but it is not structural so

much as functional diseases that they excite; not inflammation, but exhaustion with anæmia, or perhaps alternations of anæmia and hyperæmia, neurasthænia or nervous exhaustion, cerebrosthænia or exhaustion of the brain, myelasthænia or exhaustion of the spinal cord, hysteria, hypochondriasis, spasms and neuralgias. These are the diseases that sexual abuse invites or aggravates. Organic diseases, with a *coarser* pathology, have usually an entirely different origin. The one maxim in medicine to which my studies lead me is that *functional excess primarily causes functional disease*. Over-use of the brain causes functional disease of that organ; over-use of the stomach causes functional dyspepsia; over-use of the sexual organs causes functional debility of those organs, or of the whole central nervous system. Structural disease may follow all these excesses, but not usually, unless the excess is supplemented by some outside influence. A man may be *worried* into insanity, but not often is he *worked* into it; the stomach may be structurally diseased by bad food, but not, as a rule, by simple overloading with good food; and sexual excess, to excite organic disease, must not only be very excessive, but must be reinforced by other disease-provoking forces.

It is true enough that inquiry into the personal habits of ataxic patients very often elicits the confession that at some period of their lives they have been guilty of what may be regarded as sexual excess; but are they therefore sinners above all other Galileans? How many healthy men in the world are there who have not at some time abused their sexual organs? And yet ataxy is comparatively a rare disease, and those who are its victims do not give any more evidence of excesses than thousands and tens of thousands who will never know what ataxy means.

I have studied this subject closely and carefully with nearly every case that has fallen under my observation, and I am persuaded that, at most, sexual excess can be nothing more than a predisposing cause of ataxy, and that, in this relation even, it does not occupy the first place, if, indeed, it does the second place; and that therefore the minds of our poor patients should in this regard be disabused, that they may not add to the sufferings of their sufficiently terrible disease the agonies of useless remorse.

One plausible reason for suspecting that sexual excess is the cause of ataxy is found in the unnatural sexual desire that so often precedes the ataxic symptoms. The increase of desire naturally calls the attention of the patient to the sexual organs, and almost compels a certain amount of abuse; and when questioned concerning his habits, it is no marvel that he recalls and confesses his recent experience in this respect. Now, this increase of sexual desire is often, if not always, the *effect* of spinal congestion, by which the cord is rendered excessively active; it is a sign, not of health, but of disease. It is not, however, nor is the abuse which it invites, the cause of the degeneration of the cord into which congestion leads.

The most, then, that can be said of sexual abuse

in its relation to ataxy, is that, by weakening the cord, it may in certain temperaments prepare the way for colds, mechanical injuries, or, perhaps, for syphilis to enter in and take possession.

Prognosis.—The prognosis of this disease under electrical treatment alone, or in combination with drugs, may be thus generally stated. A very small proportion of cases apparently recover; a considerable number are very greatly benefited in all the leading symptoms; about the same number are but slightly benefited; and in a few cases absolutely nothing is accomplished.

The proportion of absolute cures is so small that there is a natural temptation to doubt the diagnosis or pathology of any reported cure. The cases that are brought on by mechanical injury, especially by concussion, offer the best prognosis; and this is true, I believe, of other nervous disorders. The explanation would appear to be that the disease excited by concussion is of a temporary, and comparatively transient, character, and the character of the lesion is far less severe than in those cases that come on slowly, through long years of incubation. In my observation, the most satisfactory improvement has been in those cases of ataxy that were brought on by concussion. This is also true of paralysis in general, excepting, of course, those cases where the spinal cord is directly and seriously injured.

Most of the published statements in regard to the prognosis of the disease under electricity, as indeed under any other form of treatment, must be received with great caution. Many of the physicians who report the cases have perhaps never before seen a case where they made the diagnosis of ataxy, and in the instance that they publish there is much probability of deception; and this probability is increased if the patient perfectly and permanently recovers. Hysteria comes in to complicate the diagnosis, and some of the reported cures have been, without doubt, of an hysterical character. Spinal congestion is very often mistaken for spinal sclerosis; the symptoms run into each other, and the former in some cases leads to the latter. But spinal congestion is relievable and curable, while spinal sclerosis is rarely so. Some of the supposed cures have been very likely simply remissions in the course of the disease.

I make these remarks not by way of discouragement, but rather to correct two opposite and prevailing errors: first, that ataxy is incurable; secondly, that it is frequently cured. It is midway between these extremes that the truth lies. The prognosis under treatment by electricity is favorable enough to give us encouragement to try our best, and to persevere. Sclerosis is to the spinal cord what tuberculosis is to the lungs; *tuberc dorsalis* (such was the old name of ataxy) and *tuberc pulmonalis* are in prognosis alike bad and dreary. Both diseases mean business, and come to stay. Neither yields without a struggle,—a long one and a hard one. Both are treacherous, and may suddenly reappear when we suppose them to have fled forever. But the prospect in consumption, bad as it is, is yet sufficiently good to stimulate us to the hardest efforts to fight the enemy. It is very different from cholera,

when we give our powders every hour until the patient dies. Now and then a consumptive patient gets well, and remains well; there are many who, by hygiene and treatment, will lengthen their lives by months or years, and wonderfully mitigate suffering. There are others over whom the disease marches like an overwhelming flood, bearing everything before it. Now, to all this spinal sclerosis is parallel, with this difference, that its progress is very much *slower* than that of tuberculosis. Consumption is a disease of months; ataxy is a disease of years. So far as I know, only one of the cases that I have seen has died; and in his case the disease was complicated, and he was guilty of great imprudence. I have known of a number of cases where the patients have lived ten, fifteen, and twenty years, and are living, and in some cases useful and tolerably happy, to-day.

It has been the fashion among some to decry all attempts to treat locomotor ataxy, because, as they say, the pathology is against us. They who say this forget three things: *first*, that it is possible by treatment to *arrest* disease when you cannot cure it. What should we say of a farmer who would make no efforts to stay a conflagration that had already destroyed half his forest, and, unless stopped, would soon destroy all the rest, and perhaps his house with it? To arrest a disease in certain stages sometimes amounts to a substantial cure. Every organ of the body is given in excess of actual needs of existence: we have more liver, more stomach, more lungs, very much more sexual power, and even more of brain and of spinal cord, than are required for simple existence or even for tolerable health and happiness. Experience has demonstrated over and over again, is indeed constantly demonstrating on every hand, that the liver and stomach may be so seriously diseased as to lose a considerable fraction of their functional capacity, that the sexual power may be half destroyed, that a large fraction of a lung may be obliterated, that even a portion of the brain may be scooped out, and yet the man thus maimed remain measurably strong and active and happy and attain a good old age. If, now, one can get along with half or three-quarters of stomach, or liver, or lung, or sexual power, or with nine-tenths of a brain, why may we not get along with perhaps three-quarters or four-fifths of a spinal cord? And if the treatment of ataxy is begun in time, while yet only one-quarter or one-third of the cord is degenerated, why may not the disease be arrested at that point, and the rest of the cord saved? In tuberculosis, as every dissecting-room reveals, there may be positive arrest of the morbid process at various stages; the ruined portion of the lung is not restored, but the healthy portion is saved further ravages, and the scar and cavity remain, and the patient dies years and years afterwards of some other disease. Now, if it were as easy and as common to examine the cord as it is to examine the lungs, I suspect that not a few cases would be found where sclerosis had begun but had stopped,—the diseased portion remaining diseased, and the healthy portion doing the duty of the whole cord, and allowing the patient to die of some other disorder.

Secondly, the skeptics forget that the portion of the cord not diseased may be stimulated and toned and strengthened by treatment so that it does its duty better. Different parts of an organ may act vicariously, so that when one is injured the other may in a measure take its place. Something in the nerve-force imperfectly analogous to collateral circulation takes place, we may believe, in any localized disease of the cerebral nervous system; for organs and parts of an organ but rarely do their uttermost in every direction, as enormous force is kept in reserve only to be called out in great crises. Disease of any part of an organ calls out this reserve force; and the application of electricity—one of the most potent of all means for improving nutrition—and the use of tonics and nerve-food may enable the overworked organ to perform its extra duty without exhaustion.

Thirdly, these critics forget that bad and painful symptoms may be relieved, even when the disease is not arrested. The anæsthesia and the hyperæsthesia, the numbness and the horrible neuralgic pains of ataxia, may be relieved greatly by electrical treatment rightly directed, even when the lack of co-ordinating power is not a whit improved. Again, coming back to my illustration, what intelligent physician is there who coldly folds his arms in the presence of consumption in the first or even second stage? Do we not all of us rather send our patients South and West, and beyond the sea? Do we not ply them with cod-liver oil and phosphates, with good food and gay society, in the hope and expectation that there is possibly one chance in ten of a cure, and one chance in ten of grateful relief and prolongation of life? With a similar hope may we treat our ataxic patients with electricity, ergot, phosphorus, and nitrate of silver,—and to all these we may add hygiene, especially in the form of *rest*; which, as Dr. Mitchell has well pointed out, is of much efficacy in this disease. It used to be said that if a man got well of consumption he never had consumption. We now know better. The question has ceased to be a question at all. A few years since, a friend of mine—one of our most eminent and laborious editors—consulted me for symptoms so serious that I took him for consultation to Dr. Austin Flint, who made a clear diagnosis of tuberculous deposit in one lung. Under time, hygiene, and cod-liver oil and whisky, he not only improved, but, as Dr. Flint has stated, recovered, and is well to-day, and is one of the most laborious men in the land. When I was a member of Yale College, ex-President Day of that institution died at a very advanced age; and on post-mortem there was found in one lung a cavity that had healed thirty or forty years before, when he was a young man, and was expected to die of consumption.

Years hence, when our means for examining the morbid spinal cord are more complete and diffused, it is possible that we may cease to be surprised or skeptical when we hear of the cure of posterior spinal sclerosis.

Treatment.—Ataxia may be treated electrically by a combination of several different modes of

application: galvanization of the spine, central galvanization, and general faradization, when cerebral disturbance or general ataxy of the nervous system appears; galvanization of the cerebral sympathetic, and peripheral faradization with sponges and the metallic brush. All these various applications may be made with weak or strong or medium currents, according to the wants of each case.

The principles on which the electro-therapeutist treats ataxy are typical of the principles on which he will be likely to treat all forms of disease; they will of themselves suffice to indicate to what school he belongs. He who holds the half-truth that only the seat of disease should be treated will confine himself to electrization of the spine; he who cherishes the delusion that the faradaic current cannot affect the nerve-centres will use in this disease only the galvanic current; he who blindly adopts the wild generalizations about the differential action of the ascending and descending currents will prefer either one or the other direction, according to his pathological theories; he who interprets all local disease to be the result and expression of general disease will at once resort to general and central applications; he who suspects the sympathetic to be the subtle source of all human woe will furiously galvanize the cervical ganglia; he who knows nothing about pathology or theories, and cares nothing about them, will empirically treat the symptoms. The wise and well-cultured physician, with eyes open both to pathology and to experience, will try all methods, and in the light of the results will hold fast to those which in each case seem to do good. I have found good results from simply treating the leading symptom,—the anæsthesia,—without any special reference to the cord. I do this by means of the metallic brush, or by a finely-pointed metallic electrode, making the application over the feet, legs, arms, and all parts of the body that are anæsthetic. The end justifies the means. I have found more good, in some cases, from this method, than from galvanization of the spine and all the other methods combined. When the anæsthesia is profound and permanent, currents of great strength are sometimes not only not disagreeable, but positively agreeable.

In recommending this method I do not recommend exclusive reliance upon it: it is to be used in alternation with the other methods of which I have spoken. It should not be forgotten that the reflex effect of powerful peripheral faradization on the cord may be of greater service than galvanization of the spine.

I illustrate these statements by two or three cases.

Posterior spinal sclerosis; concussion of the spine complicated with attacks of aphasia and aching. Very unusual improvement under galvanization of the spine and nitrate of silver.

Dr. N., a medical gentleman, over 70 years of age, was brought to me November 9, 1872, by Dr. Corey. About six months before, the doctor undertook to get on a street-car, but, the iron support being loose, he slipped, and fell on his hip and leg, and for this he was treated surgically. He was laid up with the injury to the leg and hip for some weeks. Certain nervous symptoms also began to appear after a few weeks, but

they were not referred to any injury of the cord, and spinal sclerosis was, very naturally, not suspected. Dr. Corey had made the diagnosis of degeneration of the cord before bringing him to me, and this diagnosis corresponded with my own. The patient had a stiff and uncertain gait, and could not turn round quickly without falling, nor stand still when his eyes were closed. A strange complication was occasional attacks of utter inability to speak, accompanied with suffusion of the face and shedding of tears. These came on under any special excitement, and lasted from one to five minutes.

The anæsthesia and *analgesia* of the lower limbs were profound, and electro-sensibility was but slight; but there was no loss of electro-muscular contractility, and no motor disturbance whatever. There was also a deficiency of the sense of pressure, as indicated by the *piesmeter*. At night there was great pain in the back, with a sensation of numbness that often compelled him to rise and walk the room.

As the patient was entirely well at the time of the accident, and as the symptoms of sclerosis followed or at least began to appear a few weeks after the accident, and as there was no evidence of exposure of any kind, it was clearly a case of *traumatic ataxy*.

The case was subsequently brought into court, in order to collect damages of the railroad company, and was decided in favor of the patient. Being called upon to testify, I gave it as my opinion that the disease from which the old gentleman suffered was of so grave a character that he would never recover, but would be a great sufferer until he died.

I subsequently treated him by mild galvanization of the spine, and nitrate of silver, and in the course of a month he began to improve, and, what is more remarkable, the improvement continued. He did not fully recover, but came nearer to a permanent recovery than any other case that I have yet seen. He was able to resume the practice of his profession.

Posterior spinal sclerosis beginning in spinal congestion. Some improvement under faradization with the metallic brush.

Mr. D., a gentleman 50 years of age, was referred to me March 17, 1873, by Dr. T. M. Markoe. The patient was of a strong build, and of a sanguine lymphatic temperament; during his whole life prior to this disease he had known nothing but health. One year before, he had attended a sale of pews in a church, and for three hours had sat quite still in a cold room. He went there in absolute health; he came out with a feeling of numbness in the legs, which extended to the hands. He was never well again.

On examining him, I found persistent and profound anæsthesia of the hands and feet, and even of the arms and legs. Tingling and pricking and stinging sensations were felt. Sexual power was diminished, but not destroyed. He could stand with *closed eyes*, but could not turn quickly round. Tests with the dynamometer showed good, strong muscular power. At times he had suffered from sharp, shooting, neuralgic pains in the legs. The diminution in electro-sensibility was so great that very powerful faradaic currents applied with the sponge caused *little or no pain*, although the *prick of a pin was quickly felt*. The patient walked quite comfortably, and attended to his business. The treatment used at first was galvanization of the spine, combined with ergot and nitrate of silver internally; but all did no good. I then tried general faradization, and last of all faradization with the metallic brush. The latter accomplished something,—reduced the anæsthesia and relieved a little the abnormal subjective sensation.

Posterior spinal sclerosis; numbness in all the extremities; no impairment of motor power; very little neuralgic pain; remarkable feeling of coldness apparently by taking cold after exertion. Some improvement under central galvanization and nitrate of silver.

Mr. T., aged 51, married, a stone-cutter, was brought by Dr. Tuthill, February 2, 1872. Two years before, while working very hard at his trade on snowy and damp ground, he was taken with numbness and feeling of heat in his legs. All his life he had been of rather nervous organization, and was easily moved to tears. At that time there was no affection of the bladder; the sexual power was unimpaired; very little neuralgic pain, and had been little; there was no pain in the back, but the bowels were costive, and there was a feeling as of a cord around the abdomen; a feeling of heat and burning in the bottoms of the feet was noticed. His legs were *remarkably cold*; oftentimes they felt as though they *were naked*. His eyes were readily suffused with tears. After a month of treatment by central galvanization and nitrate of silver, he left, improved somewhat, but not markedly, in all the symptoms.

There are three general facts of interest in locomotor ataxia that are worthy of note.

First, it is more frequent, so far as I can learn, in the North than in the South; cold, damp climates favor its development. In the early stages, long residence in tropical or subtropical regions is worthy of trial.

Secondly, it is very often complicated with congestion and sclerosis of the anterior column. The neuralgic pains, of which so much is said, do not appear in much more than half the cases. I am not yet able to say whether they are a good or a bad symptom. One thing is sure, the worst and most obstinate cases I have yet seen had no neuralgic pains. Another point equally true is, all the characteristic neuralgic pains may exist in those who never have ataxia.

Thirdly, the results of treatment here, as in all nervous diseases, must depend on the mental organization of the patient: a strong, resolute patient will live when a feeble, timid patient may lay down his armor, give up, and die.

PRURITUS HIEMALIS.

BY JULIO J. LAMADRID, M.D.

I FIND in my note-book the following accounts of two cases of pruritus hiemalis, which so confirm the able paper recently published by Dr. Duhring in the *Philadelphia Medical Times* that I think they are of some interest:

Case I.—M. R., a young married woman, aged 20, consulted me on the 18th of October, 1872, about an itching, burning sensation upon the back, especially between and on the shoulder-blades; coming on in the evening, but more severe soon after taking off her clothes, and lasting a few hours after retiring for the night, sometimes preventing sleep, and causing a great desire for scratching, which, if gratified, as was generally the case, left the patient as bad as ever, if not worse, and seldom afforded any relief, as stated by Dr. Duhring.

Upon examination of the parts, I could not see or detect any indications of disease or eruption, except a

few marks caused by the scratching, and a peculiar look of the skin, like goose-flesh, which is often the result of cold weather. There was no indication of uncleanness or neglect of her person. On further examination of the case, I was unable to find any real cause for this trouble; but, on inquiry as to the habits of the patient, I found that the bowels were inclined to be inactive,—in fact, had not been moved for three days. Here I at once saw the indications for treatment, which consisted in the use of laxatives and such means as were in my power to produce a regular action of the bowels. In conjunction with this, I advised the sponging of the affected parts with hot water every night just before going to bed, and found it to give some relief, but often to fail to do any good. In this case I did not use the alkaline bath, as the disease began to get better as soon as the patient's bowels were once more in accordance with the laws of nature.

Case II.—William R., a merchant, aged 25, and husband of the above case, came to consult me on the 30th of October, 1872, with the same complaint as his wife. He had all the same symptoms, with the exception that the affection in this case was confined altogether to the lower extremities, especially on the legs. On examination of the parts, I could not, as in the case of his wife, find any rash or change in the texture of the skin, or see any signs of uncleanness.

On further inquiry, I learned that the patient was suffering with torpidity of the bowels and hemorrhoids. I put him under the same treatment as the above case, but in this instance I prescribed the alkaline bath, with better success than with the hot water. I also attended to his piles by means of iodoform suppositories and such ointments as are usually recommended in the text-books. I need only add that my patient got well soon after the cause was removed,—which I am satisfied was the constipation.

Before I leave this subject, I shall ask the attention of my readers to the fact that the disease in the first case was confined to the trunk or back, a thing rarely to be observed, as remarked by Dr. Duhring. Farther on he says that the disease is unaccompanied by constipation. But, according to my own observations, it is quite the opposite, and I believe this to be the real cause of the disease.

Both parties were again visited by the same trouble during last fall, and again I traced it to the same complaint,—constipation.

BROOKLYN, LONG ISLAND, January 13, 1874.

A CASE IN WHICH BOTH LEGS WERE AMPUTATED IN UTERO.

BY GERALD O'FARRELL, M.D.

NOVEMBER 20, 1873, I was called to see Mrs. A., aged 33, primipara, a native of Ireland. She stated to me that she supposed she was in the sixth month of her first pregnancy, and that she had had frequent hemorrhages during the past six weeks. On making an examination, I ascertained that she was pregnant, but so feeble was the murmur of the foetal heart that I deemed it prudent to express no opinion as to whether it was living or not, although the woman was very anxious to know.

I ordered liq. ferri persulphatis in five-drop doses every three hours, with rest in the recumbent position for two weeks.

December 24 I was called to see her again, and found that there had been no return of the hemorrhage,

but that she was in labor; the os uteri fully dilated, the membranes ruptured, and the breech presenting. The labor was completed about an hour after my arrival.

I observed as soon as the child was born that both legs had been amputated by the funis, the right being entirely removed from below the insertion of the tendon of the patella, the left just above the ankle, with the foot still attached by a small shred of skin. The stumps were cicatrizing, the centres being bright red, with patches of gray lymph on the edges. The two middle fingers of the left hand were webbed. The scalp was thickly covered with gray hair, with the exception of the anterior and posterior fontanelles, which were covered with a greenish fur, such as is seen on the cadaver in the dissecting-room. The funis was black, and became detached from the placenta on the slightest traction. The placenta was entirely adherent, but so soft as to be with difficulty removed entire. The child was a male, and lived twenty-seven hours. The trunk was much more developed than the lower extremities.

Asking the lady if she had met with any shock or accident, she informed me that just prior to the first hemorrhage she had gone to visit a friend, and had worn a very tight-fitting dress. On reaching her friend's residence she became faint, and had to be carried into the open air. From that time she failed rapidly in health. The tissues of the woman were perfectly blanched, and she had a very copious and offensive discharge during the next ten days, when erysipelatous inflammation set in. She was ordered tinct. ferri chlor., gtt. xx three times a day; quiniæ sulphatis, gr. ii every three hours, with a local application of chlorate of potassa in flaxseed mucilage. She recovered perfectly, under the above treatment, in two weeks.

SUPERNUMERARY FINGERS AND TOES.

BY CHARLES W. BROWN, M.D.

DANIEL H. had five fingers and six toes. M., brother of Daniel, feet and hands normal; his only daughter had five fingers and six toes; and her two children's hands and feet were in the same way.

David, another brother, had additional fingers and toes, and his only daughter had only additional fingers.

H., son of Daniel, had six toes on each foot; his hands were normal. His three children had five fingers and six toes.

R., another son of Daniel, both feet and hands the same. He has two boys and two girls. One boy had six toes on one foot. One girl had additional fingers and toes.

I was called to remove the extra members from the last-named case, an infant, then six weeks old. On examination, I found that both feet contained six toes each, and they were normal in shape, with perfect joints, and in the additional toes the usual amount of motion. They were situated the same as the normal small toe, instead of being connected with the great toe, as Dr. Gross says they usually are. So I decided not to remove them.

The fingers were situated at the side of the metacarpophalangeal articulation of the little fingers, at right angles with the normal fingers, and had each a distinct joint, which I disarticulated, forming a flap of skin which covered the wounds completely. They healed readily, leaving no deformity.

All the other cases were nearly the same as the last-mentioned case, except the boy with one additional toe that was situated at the base of the great toe.

MANSFIELD, PENNA., January 16, 1874.

NOTES OF HOSPITAL PRACTICE.

PENNSYLVANIA HOSPITAL.

SERVICE OF DR. R. J. LEVIS.

Reported by JOHN B. ROBERTS.

INTRA-CAPSULAR FRACTURE OF THE NECK OF THE FEMUR—THE USE OF WEIGHTED SPLINTS IN THE TREATMENT OF FRACTURES.

AN old woman, while walking across the floor, tripped, and, falling, sustained a fracture of the neck of the femur.

It is necessary in injuries in this situation to be able to make, if possible, the differential diagnosis between intra- and extra-capsular fractures, for the prognosis in the two cases is very different. If the patient is over sixty years of age and the injury caused by such a slight accident as tripping upon the carpet, it is probable that the fracture is intra-capsular, because the bone within the capsular ligament is cancellated, and, becoming with advancing years more earthy in composition, is brittle and readily broken by muscular contraction or slight indirect violence.

Extra-capsular fractures, on the other hand, are usually the result of the application of a great degree of violence, as in a case in the hospital, where a man, in attempting to pull a door-bell violently, was precipitated down a flight of steps to the pavement by the wire of the bell breaking, and sustained a fracture of the neck of the femur external to the capsule.

The shortening in intra-capsular fractures rarely exceeds three-quarters of an inch, for the capsular ligament retains the ends of the fragments in proximity; the surgeon, however, by pressing the bone upward can cause a still greater decrease in the length of the limb. A striking symptom is the peculiar attitude assumed by the injured limb, which is everted so that the external surface of the foot lies almost flat upon the bed, with the heel resting in the hollow above the os calcis of the other side.

It is difficult to obtain crepitation in this fracture, because the head of the bone lying loose in the socket is not sufficiently fixed to permit friction upon it, but moves readily with the motion of the shaft. A sensation similar to crepitus, however, is sometimes perceived, and often considered to be such, when really it is the rubbing of the end of the shaft against the ligaments and edge of the acetabulum. A good deal of injury is sometimes occasioned by repeated attempts to obtain crepitation, which only succeed in rupturing any spicules of bone which, perhaps, may be holding to some extent, by partial impaction, the extremities of the fragments in apposition.

A diagnostic point of great value is obtained by placing the hand upon the great trochanter, and observing the arc through which it moves when the limb is rotated on its long axis by an assistant.

In the normal condition, the neck of the bone being intact, the trochanter moves through an arc with a radius corresponding in length to the distance from the tuberosity to the articular surface of the head of the femur, and the arc of rotation is limited by the acetabulum and the ligaments of the joint; but if the neck be fractured, the motion will be in an arc of a very short radius, though it will be through a greater portion of a circle. In fat individuals it may be difficult to differentially diagnose fractures of the neck of the femur, owing to the impossibility of examining the parts thoroughly. If such be the case, place the patient upon his abdomen, and, having etherized him, see how far the injured limb can be lifted in a backward direction up from the bed, for it will soon be arrested against

the brim of the acetabulum if the neck is intact; but if fractured, the limb can be bent backwards to an abnormal extent.

A feature about these fractures which has a tendency to mislead the surgeon is that the patient is sometimes able to walk a considerable distance after the receipt of the injury, which seems incompatible with the existence of fracture of such an important bone as the femur.

The prognosis in intra-capsular fractures is very unfavorable, for union seldom, if ever, occurs, because of the impossibility of obtaining correct apposition of the fragments, the great effusion of synovial fluid bathing the parts and preventing the formation of callus, and the want of a sufficient supply of blood to the head of the bone, which has its circulation almost entirely cut off by the solution of continuity with the shaft. If, then, it were certain that this was a fracture entirely within the capsule, it might almost be left without treatment; but, as it may be partly intra- and partly extra-capsular, it is always proper in these cases to apply extension as in other fractures of the thigh, to afford an opportunity for union and to relieve pain.

Extension is accomplished by fastening a small board, to which a cord and weight have been attached, under the foot by two long strips of adhesive plaster extending up the sides of the limb near to the hip, so that the ligaments of the knee-joint may not be injured by the traction. The entire limb is then covered with a bandage, and the cord, with a weight of about ten pounds at the end, placed over a pulley adjusted to the end of the bed.

Instead of the ordinary sand-bags usually placed along the limb to restrain its movements, Dr. Levis employs what he denominates *weighted splints*, which are long boxes made to hold three or four bricks placed end to end. These fulfil the requirements more effectually than the bags, for the sand in the latter is apt to work under the limb instead of remaining as a firm lateral support; and moreover they, being cylindrical, touch the limb only by a curved surface, while the weighted splints with cotton or oakum padding present a wide surface, against which the member rests, and by which it is held as firmly as if lateral splints were bound to it by a bandage.

HYDROCELE COMPLICATED WITH INGUINAL HERNIA TREATED BY INJECTION OF CARBOLIC ACID—DIFFERENTIAL DIAGNOSIS OF SCROTAL TUMORS.

A man was admitted into the hospital with a large hydrocele of the vaginal tunic, coexistent with scrotal hernia that was easily reducible, and for which he had worn a truss a long time. There are varied tumors occurring in the scrotum, and it is important to be able to make a correct differential diagnosis, for the mode of treatment adapted to one condition may be altogether inapplicable to another.

Hydrocele is distinguished by absence of pain and discoloration, by an elastic feel, and by the swelling first appearing at the bottom of the scrotum and gradually extending upwards. There is usually, moreover, translucency perceived upon holding the tumor between the eye and the light, especially if a tube, as an ordinary stethoscope, be placed upon the scrotum, and the observer looks through it towards the light. This translucency may be absent if the contained fluid is dark and the skin and fasciæ have become thickened by protracted existence of the condition, or if the tunica vaginalis be lined with plastic matter, the result of chronic inflammation.

In scrotal hernia, which is sometimes confounded with hydrocele, the tumor descends from the upper part of the scrotum, may be traced to the external abdominal ring without difficulty, and usually can be reduced by returning the bowel to the cavity of the abdomen by manipulation. The most certain diagnostic features are

the impulse upon coughing, always perceived in hernial protrusions, but absent in hydrocele, and the position of the testicle, which is found in the former case at the bottom, but in the latter almost invariably at the middle and back of the tumor. Occasionally these two affections coexist, as in this patient; but the two sacs, situated one above the other, present upon careful examination their characteristic signs.

The softness of the swelling and the sensation imparted to the fingers, as of a mass of worms in the grasp, serve to diagnose varicocele; which tumor, moreover, disappears entirely upon raising the scrotum so that the blood may flow out of the veins.

In cases of sarcocele and carcinomatous disease of the testicle the swelling is very heavy, irregular in its outline, instead of having the smooth, ovoidal form of hydrocele, and possesses no translucency whatever. Hæmatocele is also distinguished by weight, but is different from sarcocele and carcinoma in having nearly always a history of traumatism. When these points fail to reveal the exact nature of the affection, the diagnosis can be readily established by introducing an exploring-needle on the end of a hypodermic syringe into the tumor.

In this case there was no translucency, but upon puncturing the swelling a dark fluid escaped, which proved it to be a hydrocele, and at the same time showed the reason for its opacity.

The most popular method for the radical cure of hydrocele is the injection of stimulating fluids into the vaginal tunic, after the withdrawal of the serous effusion by the trocar. Of the various injecting fluids proposed, tincture of iodine is most generally employed at the present day; but it often fails to produce the inflammation requisite for the obliteration of the sac, and occasionally induces too much inflammatory action. Dr. Levis prefers carbolic acid for the injecting material, and in this instance used one drachm of a mixture of equal parts of carbolic acid and glycerin.

The injection of carbolic acid seems, from other cases to which it has been applied, to fulfil the conditions most admirably, producing sufficient inflammatory action to secure adhesion of the walls of the sac, and giving little or no pain to the patient, either at the time of its introduction or subsequently. This freedom from pain is probably due to the local anæsthetic effect of the carbolic acid, for it is well known that if this article be placed upon the skin the surface can be scarified with a knife without pain.

There is no danger of the inflammation being transmitted to the hernial protrusion, for experience has shown that this does not occur after injections for the cure of hydrocele complicated by the existence of scrotal hernia. It would, however, be a dangerous procedure in congenital hydrocele, since there the vaginal tunic communicates with the peritoneum, and inflammation of the latter membrane might be induced by continuity of structure.

When, as in this case, the tumor is very large, the fluid should be withdrawn simply once before attempting the radical cure, so that the sac may be contracted and the tumor reduced in size; and then, after the fluid has reaccumulated to some extent, the sac can be again evacuated and the stimulating material injected, so that the inflammation may be restricted to a diminished surface.

ABSCESS OF THE LIVER OPENING INTO THE ASCENDING CAVA.—This extraordinary lesion is reported by Dr. Leon Colin in *L'Union Médicale*, Aug. 5, 1873. Secondary purulent deposits had occurred in the lungs, which, causing a copious expectoration of pus, had during life led to the erroneous diagnosis that the abscess had burst into a bronchus.—*Boston Medical and Surgical Journal*.

TRANSLATIONS.

INFLUENCE OF THE ACTION OF THE SKIN UPON THE SECRETION OF URINE.

DR. MÜLLER (*Archiv für Exper. Pathol.*) has by the aid of appropriate apparatus conducted a series of experiments with a view to determine what influence, if any, is exercised on the quantity of the urinary secretion by variously modifying the action of the skin.

The influence of cold was ascertained by cold packing and by cold showers. The packing was carried out by means of cloths wrung out of ice-water, which were wrapped around the animal to be experimented on, and were renewed every five minutes. The duration of the experiments varied from ten to twenty-five minutes.

Ex. 1.—Rate of secretion 22 drops per minute ;
increased to 27 " "

Ex. 2.—Rate of secretion 30 " "
increased to 41 " "

Ex. 3.—Rate of secretion 24 " "
increased to 31 " "

The use of ice-cold showers gave the following results:

Ex. 4.—Rate of secretion 30 drops per minute ;
increased to 38 " "

Ex. 5.—Rate of secretion 27 " "
increased to 34 " "

Ex. 6.—Rate of secretion 21 " "
increased to 30 " "

The effect of hot applications in the form of cloths wrung out of hot water was as follows:

Ex. 7.—Rate of secretion 26 drops per minute ;
decreased to 7 " "

Ex. 8.—Rate of secretion 34 " "
decreased to 17 " "

Ex. 9.—Rate of secretion 31 " "
decreased to 18 " "

Continuous showers of hot water gave the following results:

Ex. 10.—Rate of secretion 23 drops per minute ;
decreased to 4 " "

Ex. 11.—Rate of secretion 26 " "
decreased to 5 " "

Ex. 12.—Rate of secretion 20 " "
decreased to 4 " "

The influence upon the secretion of urine of frictions of the general surface and of epispastics (blisters and mustard-plasters) was also examined into, but with negative results.

Varnishing the cutaneous surface gave results which were quite unexpected, and in fact seemed almost paradoxical.

In three experiments out of seven a diminution of from two to three drops per minute was observed. No increase in the secretion of urine was observed in any case.

Dr. Müller believes that an explanation for this diminution of the quantity of urine following varnishing of the skin may be found in the statement of Laschke-wisch, that such varnishing is followed by a general dilatation of the cutaneous blood-vessels, which reduces the pressure on the renal circulation.

The importance of these experiments from a pathological point of view may be appreciated by comparing the figures in the series relating to the effect of hot-water wrappings with the well-known good effect of diaphoretics in Bright's disease.

In the latter, a single packing, as is known, often induces a loss of weight amounting to ten pounds.

That this loss represents just so much work taken off the kidneys is evident from a consideration of the figures just mentioned.

It may be easily understood that an organ which is affected in most cases of inflammation can much more easily be cured if the great local hyperæmia can be remedied, or if even a temporary anæmia can be brought about.

It is self-evident, moreover, that an organ whose entire physiological function depends upon its varying blood-circulation could be more easily and quickly relieved from disease if this circulation could for a time be diminished and a temporary rest allowed the organ.

A. VAN HARLINGEN, M.D.

THE ACTION OF SPARTEIN UPON THE ANIMAL ORGANISM.

UNDER the above title, Dr. Fick gives (*Archiv für Exper. Path.*) an account of a number of experiments made upon frogs and other animals with this substance.

His conclusions are as follows: 1. So far as can be ascertained, spartein affects the intellectual functions both of frogs and the mammalia, and can therefore to a certain extent be regarded as a narcotic.

But this effect upon the brain is not a very marked one in degree, since, even in cases where the most decidedly poisonous results have been produced, entire suspension of consciousness has not been observed.

2. Spartein exhibits powerful toxic effects upon the spinal cord, the reflex action of which in particular is lessened to a great degree.

3. Spartein paralyzes the motor nerves, which after a larger dose of the poison lose their electrical excitability entirely.

4. A small dose of spartein causes the suspension of the electrical excitability of the vagus, so that its excitation produces no interfering influence upon the motions of the heart. In larger doses the governing centres themselves are paralyzed, so that neither by the use of muscarin nor by other means can a diastolic cessation of the heart be produced.

5. In the poisoning of mammalia by spartein, death is dependent upon paralysis of the respiratory centres.

By employing artificial respiration, life may be prolonged in the poisoned animals for some time.

A. VAN HARLINGEN, M.D.

VARICOSE AXIS CYLINDERS IN THE CENTRAL NERVOUS SYSTEM.

DR. OTTO OBERMEIR, of Berlin, states (*Virchow's Archiv*, September 10, 1873) that varicose enlargements of the axis cylinders occur more frequently in the brain and spinal marrow than is commonly supposed. A varicose condition of the finest fibres of the cerebellum and in the gray substance of the spinal cord is normal. Enlargements of this character of noticeable dimensions are found in the brain and spinal cord in the course of various acute and chronic inflammatory diseases. Marked thickening and swelling of the axis cylinders were found in two cases of glioma of the cerebral hemispheres, in a case of cystic sarcoma of the cerebellum, in a hemorrhagic spot in the right peduncle of the cerebrum, etc.

Deposits of hæmatin were found in the walls of the adjacent vessels, and free hæmatin in their neighborhood. The existence of the various axis cylinders in these cases in connection with hemorrhagic exudation appears to be due to an inflammatory process from reaction.

WM. ASHBRIDGE, M.D.

PHILADELPHIA
MEDICAL TIMES.
 A WEEKLY JOURNAL OF
 MEDICAL AND SURGICAL SCIENCE.

The Philadelphia Medical Times is an independent journal, devoted to no ends or interests whatever but those common to all who cultivate the science of medicine. Its columns are open to all those who wish to express their views on any subject coming within its legitimate sphere.

We invite contributions, reports of cases, notes and queries, medical news, and whatever may tend to increase the value of our pages.

All communications must bear the name of the sender (whether the name is to be published or not), and should be addressed to Editor Philadelphia Medical Times, care of the Publishers.

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SATURDAY, JANUARY 31, 1874.

EDITORIAL.

THE PHILADELPHIA HOSPITAL.

MOST of our readers will remember that last summer we devoted the editorial columns of several issues of the journal to exposing that leprous excrescence known as the Philadelphia Hospital, and protested against the system which labels, clothes, and feeds a man disabled by sickness or injury, as a pauper, and turns him *volens nolens* into a pauper upon his recovery. We intimated that more was to be said upon the same subject if the breach made by our attack was not wide enough for the stream of reform to find its way through, gradually open free passage, and acquire a force which should cleanse the Augean stable. We have since forborne to write upon the subject, for two reasons: First, because so many topics of more general interest have presented themselves; secondly, because we could see evidences that the good work was going on, and might be hindered rather than aided by words of ours.

After the appearance of our editorial, at first astonishment and surprise were expressed in private circles,—words of indignation, making to tingle the ears of those in authority. Then timidly, with bated breath, the newspapers of our city began to say a word or two. Philadelphia's pride, its daily press, leaving the story of the criminal courts or of the last murder, found room for some cautious words in regard to the almshouse, stating that the matter needed looking into, and then, forsooth, swelling with the pride of conscious virtue because it had shown so much of energy and of boldness!

At this juncture there occurred in the office of one of our leading dailies an incident that portrays so vividly the obstacles which reforms like the present meet with, that we insert it:

Young and ardent editor Jones, holding the *Philadelphia Medical Times* in his hands.—“Mr. Smith, look at this! Let us send a reporter and work it up; it will make a first-class thing for us, and do good.”

Old and wary principal Smith.—“Ah! It can't be true. I have some very good friends on the Board; they would not suffer such a state of affairs! It can't be true.”

So nothing is said. The good friends remain good friends, and the city advertising goes on as usual.

Notwithstanding the obstacles, more and more did public opinion crystallize around our protests, until after a time a grand jury condemned very pointedly the Philadelphia Hospital, and we could see some light breaking through the skies. Finally, not long since, the Board of Guardians, through their hospital committee, agreed to or instituted measures which seem to us the entering-wedge for the desired separation of the almshouse and the city hospital. It was agreed that hereafter all patients shall enter the hospital, and not, as heretofore, the almshouse, to be assigned to the hospital department; that a better grade of flour shall be bought for the hospital; that the patients shall no longer be clothed in the dress of the pauper, and that they shall be discharged, at the will of the hospital committee, directly from the hospital, and not simply from the hospital department to the out-wards of the almshouse.

In regard to the condition of the equipments of this hospital, half a century old, it is very significant that it was found necessary to appropriate twenty-five hundred dollars for surgical instruments.

In the name of the poor wretches whom hard fate has driven to the Philadelphia Hospital, we thank the Board which has granted this great boon; in the name of an outraged humanity, we beg of them to go on until the stricken wayfarer shall find that rest and care which it is the mission of Christianity to furnish; in the name of a disgraced community, we demand the most sweeping reforms, until at last this city of a million of people shall have a municipal hospital worthy of the name.

ARMY MEDICAL LIBRARY.

WE learn with great regret that it is proposed to cut down the usual appropriation by Congress to the Army Medical Library from fifty to ten thousand dollars. It is to-day simply impossible to

write in America an exhaustive book upon any large medical subject, because the material out of which such works are built is not at hand. There is no complete medical library in the country, and we see no prospect of there being one except through the attempt at Washington. The crippling of this movement is simply a national misfortune, destroying or putting back many years the growth of the highest medical culture in this country; reaching directly, perhaps, only a few leading thinkers in the profession, but affecting through them the whole body of physicians, and, through the general practitioners, the highest and meanest citizens. We trust that our medical societies will bestir themselves and influence the representatives of their various districts. Would it be possible to awaken that venerable old lion, the Philadelphia College of Physicians? To be sure, he is seemingly harmless,—his teeth wasted away, and his claws worn off,—but perhaps he has enough life left for a lethargic growl, and his former reputation is not yet quite forgotten.

CORRESPONDENCE.

THE FUNCTION OF THE LYMPHATICS.

TO THE EDITOR OF THE PHILADELPHIA MEDICAL TIMES:

YOUR notice of Assistant-Professor Klein's "Anatomy of the Lymphatic System" is well timed,* and will do something towards directing attention to this anatomical mystery, hitherto, of the human body. That the function of this elaborate and complicated system of living bodies should have wholly escaped the scrutiny of physiologists need not be an occasion for surprise, since the functions of so many of the organs of the body are so imperfectly understood. In the very latest exposé of physiology (Flint) its function is disposed of in a dozen lines. And the suggestion of Professor Klein that it "may be regarded as ministering to the production and development of blood" leaves the matter as much in the dark as ever. Still, it has a function, and an all-important one, too. Three years since, I think, it fell to my lot to designate its actual function in organic life. In a paper in the *Buffalo Medical and Surgical Journal*, July, 1871, I first gave my conclusions to the profession. Incidentally, since then, I have stated it in several other published papers,—*Medical Press and Circular*, London, March 26, 1873,—though it is more elaborately worked out in the *Chicago Medical Journal*, December, 1873, in connection with an abstract of the debate, a year since, in London, on the "Anatomical Relations of Tubercle to Phthisis."

Briefly, I may say, then, that the lymph performs the

same function in animal life as the seed in the vegetable world. Technically stated, the lymph stores up the force to carry its own and new material up to the special molecular arrangement or forms of organic structure from which it has been derived. It is, in fact, the precise material in which is stored up the so-called "vital force," which plays so important a part in organic life, according to accepted physiological beliefs, in the professional and naturalist minds of the past and present.

The elaborate work of Professor Klein on the "Anatomy of the Lymphatic System" can hardly fail to do something towards clearing up the obscurity in which the functions of the contents of the abdominal cavity are at present shrouded, and may lead to an entire reconstruction of the physiology of "digestion," so called, transferring its seat from the abdomen to the lungs. The changes effected in the few "proximate principles" of which all our food consists—viz., starch, fats, oils, gum, sugar, gelatin, albumen, and fibrin, animal and vegetable, etc., etc.—are not well understood as a whole, though fairly made out in part, as the dissolving of heat-coagulated albumen and fibrin by pepsin, and the conversion of starch into sugar in the liver, etc., etc. But, whatever they are, no part of new material introduced into the stomach probably finds its way to the lungs through the thoracic ducts, but all is taken up by the venous blood-vessels. The stream arriving at the right heart really consists of old and new material, to which the lymph—the seed of the tissues, so to speak—is added just before entering the right auricle. In the lungs this complex stream meets the gaseous atmosphere, where, it seems to me, the facts of observation and experiment demonstrate that the bulk of the molecular or chemical changes occurs to fit food to become living flesh, capable of performing a function, chief among which is provision, in turn, for its own reproduction from new material.

The material in which each and every living histological structure stores up the force, in the act of functional decay, for its own reproduction from new material, it is the special function, it seems to me, of the lymphatic system to take from among the other products of decay, and restore it again at a proper time and place to perform its function. That proper place is just where the thoracic ducts empty their contents into the bloodstream; and in the economy of nature no other place would be proper in the whole body but near the right auricle.

Possibly it would "pay" your publishers to reproduce Professor Klein's beautiful work, and place it within reach of the profession at large in this country; though it is a suggestive fact that it required "government" aid to bring it out in London.

More likely, as it is not a "practical" work,—that is, does not tell how to give certain drugs and medicines to cure certain so-called diseases,—those who want it will have to do as I have done—buy the English edition.

Z. COLLINS McELROY.

* *Philadelphia Medical Times*, Jan. 10, 1874.

PROCEEDINGS OF SOCIETIES.

PATHOLOGICAL SOCIETY OF PHILADELPHIA.

THURSDAY EVENING, DECEMBER 11, 1873.

THE PRESIDENT, DR. WILLIAM PEPPER, in the chair.

DR. MORRIS LONGSTRETH presented the *brains* and *spinal cords* from the following cases of *cerebro-spinal meningitis*.

Case I.—Martha R., æt. 36, was admitted to the Pennsylvania Hospital April 1, 1873, under the care of Prof. J. M. Da Costa, having been ill for four days. She was delirious, but not noisy; intelligence confused, answering questions incorrectly.

Died on April 5, 1873.

Autopsy was made fourteen hours after death. No marked morbid lesions were found in any of the thoracic or the abdominal organs. The posterior portion of both hemispheres along the longitudinal fissure was covered with a layer of lymph. On the base of the brain the lymph was more abundant, and covered the crura, pons, and the trunks of the cranial nerves. The spinal cord was covered with a thick layer of lymph, measuring nearly an eighth of an inch in thickness, extending throughout its length. The lymph was in the sub-arachnoid space, and was adherent to that membrane; it was quite firm in consistence, and of a grayish color.

The spinal cord only was exhibited, and is preserved in Prof. Da Costa's collection at the Jefferson Medical College.

Case II.—Philip G., æt. 38, was admitted to the Pennsylvania Hospital March 15, 1873, under Dr. James H. Hutchinson.

The surface of the brain has a bright-red appearance, from the intense congestion of the vessels of the pia mater. The lymph exists mostly in the sulci between the convolutions, but in places covers the convolutions also. The congestion is greater on the convexity of the brain, and the lymph more abundant on the base.

The spinal cord is greatly congested, the membranes opaque, and lymph exists in patches throughout its length. There are three or four *calcareous particles* deposited in the lymph.

The notes of the case are published in the *Philadelphia Medical Times* for June 28, 1873, by Dr. Hutchinson, and both specimens are preserved in the Museum of the Pennsylvania Hospital.

Case III.—John L., æt. 33, was admitted to the Pennsylvania Hospital April 15, 1873, under the care of Dr. James H. Hutchinson.

The vessels of the cord are considerably injected; the arachnoid is nearly opaque. The deposit of lymph is most marked at the lower portion; a small portion of the upper dorsal region, however, is completely covered. A few very minute calcareous particles are present.

This case is published in the *Philadelphia Medical Times* for June 28, 1873, by Dr. J. H. Hutchinson, and the spinal cord is preserved in the Museum of the Pennsylvania Hospital.

Case IV.—George Barley, æt. 22, was admitted to the Pennsylvania Hospital May 9, 1873. Notes of the case are in the Register, No. 229, for 1873-4.

The brain is much congested; on the convexity there is some lymph, on the base the surface is quite shaggy with shreds of inflammatory adhesions, and a layer of lymph exists in the sub-arachnoid space. The cord is not markedly congested; the membranes are thickened and opaque. An uneven layer of lymph covers the cords, and in it are imbedded some particles of calcareous matter.

Case V.—Edward A., æt. 35, admitted to the Pennsylvania Hospital April 16, 1873, under Dr. Hutchinson's care. The spinal arachnoid is hazy and somewhat opaque. There are streaks and patches of lymph beneath it, and one or two calcareous points. The vessels of the pia mater are considerably injected, and the consistence of the cord itself is rather soft.

The notes of this case are published in the *Philadelphia Medical Times* for June 28, 1873, by Dr. Hutchinson, and the specimen is preserved in the Hospital Museum.

Dr. J. H. HUTCHINSON said he had had several of these cases reported by Dr. LONGSTRETH under his own observation, but could add nothing to what had been said, except as to the appearance of the spiculæ of inorganic matters beneath the membranes. These were first thought to be spiculæ of bone which had obtained accidental admission in the operation for opening the spinal canal; but examination proved this view to be erroneous, as they were not bone-tissue, but simply inorganic matter.

As to treatment, none seemed to afford relief, except in one instance, where cups to the back of the neck appeared to give great relief. Bromide of potassium also afforded some relief in quieting the patient.

Out of the six cases treated in the Pennsylvania Hospital, five died; and at the post-mortem examinations the lesions discovered were by no means commensurate with the degree of the symptoms,—cases in which the symptoms were most severe and of longest duration showing a simple hyperæmia of the spinal cord, while another, in which there was the history of but two or three days' illness, exhibited extensive changes.

Dr. S. W. MITCHELL said that he had seen a large number of these cases, but his experience had been confined to private rather than hospital practice. As to treatment, his results had been similar to those of Dr. Hutchinson, nine cases out of eleven having perished. Within the last three months he had also met nine cases in which recovery had been attended by absolute deafness, in which also all treatment for the latter affection proved unavailing. He alluded to the recent paper by Dr. Knapp, of New York, in which a large number of cases of deafness following cerebro-spinal meningitis had been collected, out of which two only had been relieved by treatment.

Dr. Mitchell had also met one case of blindness after this affection, in which there was well-marked atrophy of the optic nerve, which had also failed to respond to treatment.

Dr. CHARLES H. BURNETT asked whether in these cases of deafness there was any staggering gait.

Dr. MITCHELL replied that he had met the staggering gait in one case only, but this was very marked, and associated with sick stomach. The latter symptom might have been either a cause or a consequence, but he thought the latter more likely.

Dr. BURNETT had asked the question because he was curious to know whether the deafness and staggering or sailor-like gait were associated. He had recently been informed by a gentleman practising in Pottsville that he had observed deafness following cerebro-spinal meningitis in some twenty cases, in all of which he had observed the staggering gait. Dr. Burnett had himself met one case of the deafness in which the staggering gait was also present.

Dr. LONGSTRETH asked whether the cause of the deafness was centric, or due to some cause acting upon the nerve-trunks, as, for instance, the pressure of the inflammatory lymph.

Dr. R. M. BERTOLET said the cause assigned by Dr. Knapp in the paper referred to was an effusion of pus and lymph in the labyrinth, similar to the effusion in the retina, which causes total blindness. Dr. Berto-

let had seen about twelve cases of deafness following cerebro-spinal meningitis, but the staggering gait was not present markedly in any, and often wanting.

Dr. BURNETT said that cases had been reported by Knapp in which pus had been found in the labyrinth. He thought the best explanation of the deafness had been given by the anatomist Hasse, in a recently published instalment (No. XIX.) of his "Studies of Anatomy," in which he states that, having studied the anatomical relations of the perilymph and endolymph, he had concluded that they are perfect and complete portions of the lymphatic system, and that they are in direct communication with the fluid of the sub-arachnoid space as well as of the spinal cord. Any impression, therefore, made upon these fluids must be made upon the labyrinth and its lymph. He goes so far as to state that pathological processes may begin in the internal ear and pass into the spinal cord, and *vice versa*.

Dr. LONGSTRETH said that there had been observed failure of vision and paralysis of the facial and some of the orbital muscles, showing an involvement of the second, third, fourth, and seventh nerves, following cerebro-spinal fever. In such cases, Dr. Burnett's explanation of the communication between the inner ear and the sub-arachnoid space would certainly not account for the failure of function in the other nerves mentioned.

The PRESIDENT said he had long been satisfied that the examination of the *substance* of the nerve-centres in cases of cerebro-spinal meningitis had not been sufficiently careful. Although it was undoubted that many of the symptoms were due to pressure upon nerve-trunks, or upon the spinal cord from inflammatory exudation, he believed that many also, and especially the marked and long-remaining paralytic ones, were due, in part, to accompanying inflammation of the nervous substance.

Dr. JOHN ASHHURST, Jr., referred to the destructive inflammations of the cornea which occur in cases of cerebro-spinal fever, as rendering it probable that inflammatory changes sometimes spread beyond the meninges and implicate the nerve-centres and nerves. A case of this kind (which, however, was not at the time recognized as one of cerebro-spinal fever) came under Dr. Ashhurst's observation in 1862, and was reported to the Society early in the next year.* Paralysis existed in this case for some time before death, but at the autopsy much slighter traces of meningitis were observed than in the specimens presented this evening by Dr. Longstreth.

Dr. CHARLES H. BURNETT presented a specimen of *mycelial tube-cast of the external auditory meatus*, removed from the ear of a female 40 years of age. "She has been affected for some years with *ozæna* and hardness of hearing, but in addition to this she has had frequent attacks of sharp and sudden pain in the ear, for which she could assign no reason. These attacks endured only a day or two, and then suddenly ceased, being followed by a slight, watery, mucous discharge from the ear. It was just after the pain of one of these attacks had ceased that I examined the left ear and removed the accompanying tube-cast from the meatus auditorius. Before the removal of the tube-cast the meatus appeared lined with, and the membrana tympani covered by, a piece of wet newspaper. This homely simile will best convey to you the appearance of these parts before the removal of the fungous tube-cast.

"As I had examined the ear for another purpose ten days previously, I know that the tube-cast had formed within that time.

"By means of a pair of curved forceps, light being

reflected into the auditory meatus by means of the forehead-mirror, I seized the outer edge of the tube-cast and removed it without any pain to the patient or difficulty to myself, for this tube-cast was not adherent.

"I thus exposed the walls of the meatus and the membrana tympani to view. These parts were not extraordinarily red nor sensitive to touch or pressure. A drop of fluid taken from the auditory meatus and *immediately* examined under the microscope revealed the presence of free spores of the *Aspergillus*, and also numerous vibriones. This I believe to be the first instance on record in which these latter objects have been found in the ear of man. They might, however, *a priori*, be supposed to be present in the ear in many cases. There were no pus-cells present in the fluid-removed from the auditory meatus in this case.

"The tube-cast of the meatus is composed of mycelium richly studded with colonies of hyphens supporting large and beautiful sporangia of a brownish-yellow color. The hyphens are not septate, and there is no membrane enclosing the sporangia. Myriads of free dark-brown spores are found, with a very little epithelium, imbedded in the mycelium as well as lying on its surface.

"The thalli are septate, and here and there I detected a little spot of bright-green coloring-matter in them. The spores are echinate; but, although that is a feature of the *A. glaucus*, I think the color of the sporangia and spores might justify the conclusion that this is a specimen of *A. flavescens*.

"The treatment consisted in three instillations of a solution of nitrate of silver (100 gr. to f \bar{z} i) within the first ten days, and the repeated daily use of instillations of alcohol (90 per cent.) for one month. This continued use of alcohol or any other parasiticide is indicated in any case of a growth of *Aspergillus* in the ear, if the disease has been contracted in a damp dwelling where the patient is still living, as in this case.

"There has been no return of pain or discharge, and upon inspecting the meatus I find no appearance indicative of the presence of a fungus in the ear.

"The rapidity of the formation of the fungous tube-cast, the presence of vibriones in the meatus, and the serous nature of the discharge from the ear, constitute very interesting features in this case.

"Wreden, of St. Petersburg, as well as other distinguished observers of this form of aural disease, unite in their testimony as to the great rarity of purulent otorrhoea as a feature or a cause of this disease, whereas, from increasing data, it appears that the presence of fungi in the external auditory meatus is productive of a characteristic but scanty *serous discharge*."

Dr. BERTOLET said that the occurrence of *Aspergillus* in the external auditory canal was not very rare. He had met cases where there has been discharge from the middle ear, and the mycelium has developed subsequently, the moist surface apparently tending to encourage its growth. He did not think that much importance could be attached to the presence of vibriones, though he is not aware of having seen any under these circumstances. He had often seen them in pus removed from the ear.

Dr. JAMES TYSON exhibited for Dr. KNIPE, of Norristown, Pennsylvania, *two concretions removed from the appendix vermiformis* of a gentleman aged 25, which had caused fatal peritonitis. The history was as follows:

For nearly a year past the patient had suffered occasional severe attacks of abdominal pain, so frequent and so severe that they had attracted the attention of the family as thus occurring. At other times, however, he enjoyed fair health, and was remarkable for his bright and cheerful disposition.

On the 21st of November he went "turtle-hunting," and in the course of the day made a leap, during which

* See *American Journal of the Medical Sciences*, October, 1863, p. 401.

he said he felt something give way, as if within his abdomen. He did not complain until Sunday morning, when he mentioned that he had pain in his stomach, which kept on increasing until evening, when he consulted his physician, Dr. Knipe. The doctor gave him two grains of morph. sulph. in four powders, of which he took three during the night without relief.

On the next day, Monday, he began to vomit. His bowels were moved that night by two doses of calomel, gr. x each, and again on Tuesday morning. The symptoms of peritonitis, however, became more marked, and he died on the morning of Friday, the 28th of November.

The post-mortem examination was made the following day. The omentum was firmly glued to the pelvic viscera, and on raising it a large amount of pus was found in the pelvic cavity. The viscera here were all firmly adherent, and on seeking the appendix it was found sphacelated, and dilated to the diameter of one-third of an inch. In it were felt, rolling under the finger, two concretions,—a larger, cylindrical, and a smaller, nearly round. On opening the gut, the former was found to be a perfect cylinder, about three-fourths of an inch in length and one-third of an inch in thickness; the latter was irregularly round, and less than one-third of an inch in each direction. They were solid, but compressible, and could have been crushed beneath the finger. On section they seemed to be made up throughout of solid fecal matter, without anything in the centres comparable to a nucleus. The appendix, from its origin in the cæcum, was permeable to an ordinary full-sized probe, and, as stated, became dilated as the vicinity of the concretions was reached.

Dr. TYSON thought the previous history of the case explained most satisfactorily the conditions found. These concretions had evidently been forming some time, causing the occasional attacks of severe pain from which the patient had suffered throughout the year, and which were the result of attacks of limited local peritonitis. These were sufficient to produce adhesions, and it was one of these which was ruptured in the leap referred to, and thus became the starting-point of the final peritonitis, of which he died.

Dr. WILLIAM PEPPER presented a specimen of *perforative disease of the appendix vermiformis and ileum*, from a case in the practice of Dr. J. R. F. BELL. The patient was a vigorous lad of 17 years of age. There had been no symptoms of intestinal disease before this attack, which had followed violent over-exertion. The early symptoms were severe pain in the right iliac region, and frequent and violent vomiting. The bowels were moved on the third day by enemata, though the fecal matter probably came only from the colon. The symptoms were much relieved at first by opiates. No free evacuation of the bowels, however, occurred. Extreme soreness and distention of the belly continued, and on the fifth day vomiting recurred, and soon became fecal. No tumor could be felt at any time. The urine was at first scanty, and passed frequently and with effort; but later it became abundant, and was passed easily. The vomiting was a second time relieved by opiate suppositories and exclusive feeding by the rectum, and the stomach soon became retentive, and continued so until the end. No evacuation of the bowels was obtained either by enemata or repeated laxatives, and the obstruction seemed to have become absolute. The distention of the belly increased until the coils of enormously-distended bowel could be readily traced through the thinned abdominal walls.

Death occurred, in a state of extreme prostration and emaciation, on the tenth day of the disease.

Autopsy.—Abdomen alone examined. The small intestine was enormously distended down to 18" above the ileo-cæcal vulvi. At this point there was a firm,

sharp edge of mesentery, belonging to a fold of ileum which was twisted on itself, which compressed the bowel against the right side of the vertebral column, so as entirely to occlude it. The remaining part of the ileum was empty, and pressed into a small, lead-colored mass against the right sacro-iliac synchondrosis. On following it down, a perforation of the ileum was found $1\frac{1}{2}$ " above the valve. The ulceration of the serous coat was fully 1" in diameter, while the perforation of the mucous membrane was not more than $\frac{1}{2}$ " in diameter, so that evidently the progress of ulceration had been from without inwards. The appendix vermiformis lay directly across this ulcer. For the first $1\frac{1}{2}$ " of its length it was adherent to the cæcum, its walls were thickened, and its calibre patulous. At that point, however, ulceration had occurred to such an extent as entirely to sever the appendix. The detached part was about $1\frac{1}{2}$ " long; its walls were thin and dilated, and presented two ulcerated perforations. It contained two concretions, one $\frac{1}{4}$ ", the other $\frac{1}{8}$ " in diameter, formed of inspissated mucus. This part of the appendix was connected with the proximal part only by some shreddy connective tissue. There was a small quantity of sanious pus mixed with fluid fecal matter which had escaped from the ileum, but no attempt had been made at the limitation of this and the formation of an abscess. Some of these fluids had flowed into the pelvis. The general surface of the peritoneum was dark, intensely injected, and dry, but there had been no exudation.

Remarks.—Among the points of interest about this case may be mentioned the latent existence of two concretions in the appendix, and the active symptoms excited by excessive muscular straining. The symptoms indicated two phases of the case,—the first due entirely to ulcerative disease of the appendix and ileum, and the second, which began on the fifth day, due to the perforation of the ileum and the occurrence of a twist of the bowel, entirely obstructing its calibre.

Dr. L. A. DUHRING desired to know the exact composition of these concretions. He had seen but a single case, which occurred many years ago in his own family, before he had any knowledge of medicine, but he recollected seeing the concretions.

Dr. LEONARDO S. CLARK alluded to a concretion which had been examined by Dr. James Tyson two or three years ago, in which a collection of hair had been the nucleus, and another in which a cardamom-seed had served the same purpose.

The PRESIDENT said that a great variety of objects had been found as nuclei, such as gall-stones, small intestinal worms, foreign bodies which had been swallowed, as small seeds, beads, and the like. In many instances, however, the body found in the appendix was named from some fancied resemblance, as to a cherry- or date-stone, while in reality they often are mere concretions of inspissated mucus or fæces. Even when there is a nucleus of some foreign body, concentric layers of inspissated matter usually have formed around it.

Dr. CLARK said that in both of his cases there was intense pain in the genital organs; one being that of a young girl of fifteen or sixteen years, the other that of a man of twenty-one. The pain in both instances was so great that the friends of the patients spoke of it. He had recently been reading in a Western journal the report of cases in which this symptom was also mentioned by the reporter.

Dr. JOHN H. PACKARD said that in January, 1861, he presented to the Society a concretion which had lodged in the appendix vermiformis of a boy eleven years old. He did not now recollect whether there was a nucleus or not, but an abscess of considerable size had formed about the appendix, which was perforated.

Dr. TYSON also exhibited the *heart and kidneys* of a

man aged 51, who was admitted to the medical wards of the Philadelphia Hospital about the 1st of November, with a double aortic murmur, dyspnoea, dropsy, bloody and highly albuminous urine, which contained also casts filled with broken-down epithelial cells, granular casts, and casts containing blood-corpuscles. He had been for many years an attendant about the hospital, and was very intemperate. He died within a week after admission, previous to which, however, the albumen and blood had greatly diminished. On post-mortem examination there was found extensive disease of the aortic valves, which were stiff with calcareous deposit, while the aorta was atheromatous as far as examined, which was several inches from its origin.

The *liver* was cirrhotic, hob-nailed.

The *kidneys* were simply turgid with blood, and weighed, therefore, somewhat more than in health, but were not otherwise enlarged; and their minute structure exhibited slight increase in the interstitial connective tissue.

The case was interesting chiefly in the relation of kidney- to heart-disease. Here the aortic disease was so advanced and the condition of the kidneys so slightly changed that there could be no doubt that the cardiac disease was primary, while the man had, at the time of his admission, all the symptoms of an acute nephritis. The latter was probably due to the direct influence of cold upon an organ already congested, but not otherwise the subject of extensive disease.

Dr. TYSON also exhibited the *spinal cord* from a case of *progressive locomotor ataxy*. There was extensive softening throughout the entire thickness in the lumbar enlargement, while higher up there was also a wedge-shaped segment of sclerosis involving the antero-lateral column for one and a half lines on each side of the anterior median fissure.

Dr. TYSON also exhibited a specimen of *abscess of the liver*, without history.

Dr. J. SOLIS COHEN presented a specimen of *subglottic multiple mucous polypi of the larynx*, removed with lateral forceps. Adam B., æt. 30, was sent to the doctor December 6, by Dr. Webb, of this city, on account of persistent hoarseness of over four years' duration. The general health was good, and the hoarseness the only symptom of disease. It had apparently resulted from catarrh due to exposure while the patient was on the police-force,—the voice having been much used previously in the business of huckstering. The voice had that peculiar dysphonia usually indicative of morbid growth in the larynx.

"On laryngoscopic examination, a large morbid mass was seen beneath the left vocal cord, reaching beyond the right cord, and projecting above the glottis with every expiration. I thought it was a papilloma, and so informed Dr. Webb, inviting him to attend with the patient the next day, when I would make an attempt at removal. On the following day I demonstrated the growth to Dr. Webb, and immediately afterwards introduced the forceps and removed a large portion of the growth. Examining this more closely half an hour after with Dr. Bertolet, it appeared that this growth was a distinct single polyp, partly mashed in the teeth of the forceps.

"On the following day I removed in the same manner another growth, similar in character, but also mutilated by the forceps. On examination, I was somewhat surprised to see a third growth still in the same situation. This I removed on the following day, and it was fortunately so seized as to be preserved intact.

"All these growths were pedunculated, and were attached in close approximation, apparently, to the anterior portion of the thyroid cartilage, just below the glottis and to the left of the middle line.

"The chief point of interest in the case is in the mul-

tipile nature of the growths, which, though frequent in mucous polypi of the nasal passages, is rare in those of the larynx; and another point, of less interest, is in their location.

"This is the first case of multiple pedunculated polypi that I have seen out of more than one hundred cases of laryngeal growths, and only the second of that kind that I have removed from below the glottis.

"This form of tumor is fibro-cellular, is comparatively rare in the larynx, existing in only about five per cent. of the cases of laryngeal growth; and its usual seat is upon the epiglottis or upon the vocal cords.

"If the growth is myxomatous it is still more rare; myxomata occurring in not more than five-tenths per cent. of the whole number of laryngeal growths."

The specimen was referred to the Committee on Morbid Growths, which reported: "The laryngeal tumor extirpated by Dr. Cohen is deemed by your committee to be a *myxoma*. The cells which are abundantly present in the hyaline ground-substance are mostly stellated, and frequently anastomosing; others, again, are without any processes, being nearly round. The microscopic section shows that the growth is distinctly lobulated, due to the coarse septa of ordinary connective tissue. In the latter only were any blood-vessels detected, these all presenting a very wide lumen."

GLEANINGS FROM OUR EXCHANGES.

THE CONSTITUTIONAL RELATIONS OF SECOND DENTITION (*New York Medical Journal*, January, 1874).—Dr. Joseph Mulreany, in an extremely interesting paper, records a number of cases occurring in his practice, and illustrating some practical points connected with the protrusion or cutting of the permanent teeth, especially the first four molars and the four wisdom or third molars. He believes that the physiological irritation of a new tooth cutting through the gum is the direct, though frequently unsuspected, cause of many diseases, both of childhood and maturity, and that the results of treatment demonstrate conclusively that such is the case. He says that every case of true morbus coxarius he has met with began between the fifth and seventh year, or it might be a few months earlier, and also whatever mischief occurred to the joints took place during the cutting of the first four molars of the permanent teeth, and that after they had come fairly through the process of separation commenced. His illustrations are numerous, the more important ones being as follows:

Case I.—Miss W., when a child of between five and six years, suffered from morbus coxarius. The first indications of the joint-disease were lameness and pain when the head of the femur was strongly pressed against the acetabulum. In process of time the usual symptoms of pain in the knee, flattening of the hip, and shortening of the limb, took place, but all in a mild form, and all subsided at the end of her sixth year, coincident with the complete protrusion of her first four molar teeth, leaving her slightly lame for life. She was a member of a family of a highly scrofulous diathesis.

Case II.—Margaret McC., aged 6½ years; had had pain in the left hip-joint and knee for over a year; slightly lame; hip flattened; right upper molar still to be protruded. The gum was well scarified, and she was ordered iodide of iron with senna as an aperient,—the gum to be scarified once a week until the tooth came fairly through. In a month she was greatly improved.

Case III.—C. D., æt. 20 months; had enlarged and suppurating cervical glands, but was in good condition. About the twenty-fourth month he had cut all

his deciduous teeth, and every bad symptom disappeared. In his fifth year he was suddenly seized with pains in his left hip. He was ordered an effervescent mixture containing iron and iodide of potassium, and a small blister was applied from time to time over the hip-joint. The gums were not scarified, owing to the violence of the patient. This condition continued for a year and a half; sometimes he could walk without the aid of a crutch, but invariably, when he had a teething-spell, he was forced to crawl about on all-fours. At this time a surgeon, who was called in consultation, diagnosed such an amount of disease as to warrant immediate resection of the hip-joint, though Dr. Mulreany was convinced that it was a case of morbus coxarius brought into action by dental irritation. An amputation of the head of the femur was attempted, but a deep and ample incision down to the capsular ligament assured the operator that the joint was too sound to justify him in cutting into it. The operation was abandoned; but the final issue of the case is not stated.

Case IV.—A boy, æt. 6 years, was seen in consultation. His physician stated that for six weeks the boy had had a kind of remittent fever, worse at night, with obstinate constipation. On examination, it was found that the first four molars were pressing against the gums, causing much tension, and that there had been epistaxis. A few days later, the child growing worse, the gums were scarified, a laxative mixture was given, and in two days the attack was concluded.

An important medico-legal point sometimes arises between the eighth and fifteenth year, the inflamed condition of the gums over the bicuspidis often giving rise to a purulent discharge from the vagina. The English law treats all illicit sexual intercourse with females under sixteen years of age as rape, and too often such discharges have been received as testimony of the fact.

Of the phenomena associated with dentition between the seventh and fifteenth year, scrofula of the bones, nocturnal incontinence of urine, chorea, and heart-affections are the most common.

Now in regard to the wisdom-teeth:

Case VII.—Mr. V., æt. 23, subject to violent bilious attacks, low-spirited, sleepless, constipated, frequent epistaxis, pain in articulations of lower jaw. None of the wisdom-teeth through. His gums were scarified, and he was ordered to do the same frequently, and to take a little tincture of iron and an infusion of senna. Cured.

Case VIII.—Miss A. D., æt. 18; tall, fair, anæmic, cardiac bruit, violent headaches, profuse epistaxis, irregular menstruation; wisdom-teeth not quite through. Her gums were thoroughly scarified frequently, and quinia and tincture of iron, with senna, as an aperient, were given. Cured.

Case IX.—Miss B., æt. 20; profuse epistaxis, preceded by jaw-ache, approaching phthisis of right lung, quick pulse, loud anæmic cardiac bruit, amenorrhœa, frequent micturition, constipation. Wisdom-teeth had not shown themselves. Her gums were scarified, and she was ordered quinia, iodide of iron, and tincture of digitalis.

Case X.—Miss S., æt. 17; pale and exsanguineous, palpitations of the heart, headaches, constipated bowels, menorrhagia, coated tongue, chlorotic bruit. She had lost great quantities of blood, owing to nervous obstruction at the centre of the circulation, caused by dental irritation from the wisdom-teeth acting directly on the heart. Scarifications, iron, and digitalis effected a speedy and perfect cure.

Case XI.—Mrs. J. M. S., æt. 19; married six months, during which time she has had a colored discharge from the vagina. None of the wisdom-teeth present. Scarifications and tincture of iron gave the happiest results.

Dr. Mulreany proceeds to state that dental irritation

may be the cause of dropsical effusions, both in the chest and abdomen, of heart-affections, of hysterical troubles of the joints, of masturbation, and of sterility and miscarriage, and gives cases in support of his views; but he asks that the physiological irritation of which he speaks shall not be confounded with the pathological irritation of an old, decayed, and carious tooth producing periostitis and gum-boil.

MISCELLANY.

ANALYSES made of beer-yeast and cobra-poison are said to have proved these two substances to be exactly identical in chemical composition. Such an announcement will be a veritable godsend to the anti-bacchanals, with whom it is a favorite device, when bemoaning the follies of their benighted brethren, to exhibit a bottle containing a disagreeable-looking fluid declared by them to be fourpenny ale from which the spirit has been eliminated. The teetotallers, who, like the law, take no notice of extreme trifles, will probably, in their great joy, "overlook the fact that minute quantities of other elements may be present in the yeast and poison respectively, although they elude the grasp of the chemist;" sufficient for them that the same respective quantities of carbon, nitrogen, oxygen, sulphur, and hydrogen are contained in beer-yeast as in the poison of the cobra.—*Food Journal*.

POISONOUS UNIVALVES.—Seven individuals who had eaten snails at dinner were, so says the *Montpellier Medical*, affected with sickness, diarrhœa, giddiness, fever, etc. No doubt could be entertained as to the cause of the poisoning. The seven persons had all eaten of the snails, whereas they had not all eaten of the other dishes served up at the dinner. The pan in which the snails had been cooked was in perfect condition, and had been freshly tinned. The poisoning, therefore, took place through the snails themselves. It is well known that they often feed on poisonous plants, such as belladonna, digitalis, and hemlock, and on the fields from which the snails had been gathered were found boxwood, euphorbia, and prickwood. It is on account of this that snails gathered to be eaten are generally submitted to a few days' previous fasting.—*Food Journal*.

AFTER a brief life, the *Canadian Medical Times* has passed out of existence, as a child born out of due time. The mania for losing money in medical journals still continues, however, and we have just received the first number of a new bi-monthly, the *Vermont Medical Journal*.

NOTES AND QUERIES.

As Centennial news and reminiscences are at present the rage, we print the following letters, for which we are indebted to Dr. Walter F. Atlee: they show what kind of intermittents they had in the good old times. Mrs. Cox was the wife of Colonel Cox, the intimate friend of Mr. Reed, of Revolutionary memory.

"BURLINGTON, 3d October, 1776.

"MY DEAR FRIEND,—As you must have heard by Mr. Cox of my afflictions in the sickness of my children, so I take the first opportunity

in my power to communicate the happiness I feel upon their recovery. I know you'll partake a parent's joy in seeing a beloved child restored to life after all hope was fled—that child nearly arrived to the age of woman, & just discovering what the woman would be, & to do her justice, she was what we wished her to be, a few things excepted, which time, I doubt not, will rectify. To see her in violent convulsions for thirty hours, near which period she seemed breathing her last, was almost too much to bear. She had, as well as the rest, the intermitting Fever, tho' indeed hers did not intermit at all for 17 days, only remitted when she was suddenly seized with a fit, which lasted as above mentioned, when she gradually & insensibly fell into a sound sleep which lasted thirty Hours more, during which time she never spoken nor showed any signs of reason. The fourth day her recollection returned, and also her feeling of the sorest Blister I ever saw. This day is a fortnight since the fits came on, and she is now able to sit up in her Chair good part of the day. Little Molly is well; she was the only one that escaped the Fever. The others are in a fair way now; indeed, Kitty seems quite well. What a favor I esteem it that I have kept well & able to nurse them! I have had five at a time down in the Fever. One of my maids was taken a few days ago; she is very bad. I hope tho' soon to have the pleasure of saying we are all well again. Can I enough admire the goodness and the Power of God? He brought my first-born to the brink of the grave, & then restored her as a new gift me. Surely her Life is preserved for some valuable purpose. Oh, may she improve these added years in the service of her Maker, & may I have a thankful Heart for all His favors. I had to send for Mr. Cox from the Furnace. The shock was almost too much for him. I never saw him in such distress; I was forced to try to forget my own sorrow to comfort him. But the Almighty has been pleased to comfort us both in returning to Life our Child. I know you will excuse my dwelling so long on this subject, but I will now change it, & wish I could give you any information of our Friends to the Eastward, but not one word have I heard from them these several months. I intend to try if I can get a Letter answered by the Post; I think through Mr. Reed I may. Mrs. Reed was yesterday Deliver'd of a Daughter. Poor little woman! she has much to struggle with. Mr. Reed has a dangerous Post, & his absence at this time is peculiarly distressing. He has had three narrow escapes for his Life: his Horse Shot under him; he only left a House five minutes before the regulars were in Possession of it, & in endeavouring to make a flying Lieut. return to his Duty the man Level'd his musket at him, which luckily flashed without going off. He was try'd and sentenced to be shot, when upon the day of execution everything was prepared with the greatest solemnity, the man was upon his knees expecting the Ball. The general was prevail'd upon to Pardon him, which so overcame him he had like to have Died with the joy. This I had from Mr. Montgomery, who was present. As to news, I can tell you none but what the Papers will convey before this reaches you. I believe they are in daily expectation of a Battle. What a dreadful Fire there has been in N. York. Oh, this war! What Devastation does it make! Where or when will our troubles end? The Cloud is darker, methinks, than ever, tho' the Politicians don't think so or won't say so. Oh, Sweet Peace, when wilt thou bless our Land again? "I have not heard from you in a long time; pray write soon, and be assured that however I may be taken up for a time with my own affairs, I am no less than ever your truly affect. friend & Sister,

"E. Cox."

"BATSTO, January 6, 1777.

"MY DEAR FRIEND,—Various have been my places of abode since last I wrote to you. I was hurried from Philadelphia at an hour's warning; pack'd up and sent off chief of my goods the same day I got home, but as the enemy was no further than Brunswick, I prevail'd upon Mr. Cox to let me stay with the family and such things as we could not do without till the necessity was greater for moving; I could not bear the thought of being where I could not hear from him; he left me and join'd his Batt'n at Trenton, but they were soon oblig'd to leave it, & recross the Delaware. He wrote me from there to go off immediately, as the enemy would probably be down our side of the river, & so it proved; the day after we left Mount Holly the Hessians were in it. I did not care to come here lest the Furnace might draw them to destroy it, as they were told it had been making ball during the war. I was in a great strait where to go. If I could have got over to Pennsylvania I should certainly have gone to Lancaster, but Teams were not to be got there; here we had them plenty. I fix'd half-way between Burlington and this place. I had not been there a week when I was inform'd by good authority that they had been within three miles of me. I then for the first time lost my courage; for an hour or two I was completely wretched. The manager of the furnace, who had been my helper through all the difficulty of moving, was gone to philada. I was on the roadside & had all my valuable effects in the house; I recollected that desponding was not the way to deserve help; I therefore

sent immediately for a team, loaded it with my best things and sent it off. In the evening the manager came. Mr. Cox sent off an Express to me to go from there without loss of time, & not content with that, ventur'd to come himself in the night at a great risque to hurry me away. By ten o'clock the next day our waggons were all loaded, and we sat off, intending not to have stop'd more than a night here, but to have gone many miles further; but my poor Rachel was taken ill again, & I was oblig'd to return with her to our friends—who had taken a Large house a few miles from where we were, in a by-place, where they continue still. I mean Mr. Pettit and Mrs. Reed, who had join'd families—in a few days she got better & we came here, & hearing the Enemy did not come further I ventur'd to stay, & now have the happiness to hear our Army has drove them back. Oh, may the God of Battles grant them further Success, & make our Enemies fly before them! How is my heart torn with conjectures of the fate of my other self; he was in the Battle of last thursday, at trenton, and was well afterward, but how he fared in the one at princeton the day after, God only knows. I am a miserable being at present, and shall not be otherwise till I hear of his safety. You can have no Idea of the Scenes that are every day exhibited in this part of the world—barns burnt, fences torn up, cattle drove off, women & children used ill by the Hessians when they ask for a thing and are answer'd, they have none; the bayonet is presented to their breasts, & go & get it then, is the reply, with some smart strokes of a Hickory. This I was told by a gentleman in whose house they had taken quarters, and they oblig'd him to keep two men attending the fire all night; they would not fetch themselves a stick of wood, but said the rebels should wait upon them. Many other instances I could relate that would shock you. I have seen several people that have been among them—some who got their protection. The Head Officers behaved polite, but the under ones & the soldiers most barbarously; in some houses they did not leave even a Child's petticoat nor any one wearable unstoln. I should have wrote you before, but have had a bad whitlow on my thumb; indeed, writing is my only amusement. I have receiv'd many favors from my Burln friends, and have been under a necessity of writing a good deal to beguile the tedious hours by it, & if I could receive a line from you it would help me to bear this Exile with patience. I will not further enumerate the troubles I've gone through; your sympathizing heart will too sensibly tell you. Peace has ever been my most ardent wish; it is so still could it be upon honorable terms. I think it might be obtain'd, but I am no politician. I must leave these matters, & can only now add my best respects to your good man and family. Two of my children are still unwell. Adieu.

"Your friend,
"E. Cox."

We thank the profession for the liberality with which they have responded to the appeal for aid in building a monument to the memory of the Memphis physicians who fell a victim to yellow fever, and acknowledge the receipt of one dollar each from Dr. S. Littell and H. C. W., Jr.

TO THE EDITOR OF THE PHILADELPHIA MEDICAL TIMES:

IN reading the *Times* of January 17, I find a criticism on my article on "Hymen," published in a former number. Now, I would say in answer to Dr. Bernardy, that the case was in every respect as I reported it, but I should have stated that the hymen gradually gave way under pressure until it did not offer much resistance to the passage of the child's head although it is probable that fibres of the membrane were ruptured, and continued to give way until dilatation was sufficient for the child to pass. And it is possible that rupture may have taken place after the membrane became dilated, and was unnoticed. I thought dilating preferable in this case to incising, as it is less liable to produce hemorrhage. Ramsbotham, in his work on Obstetrics (page 248), says of the treatment of these cases, "The aperture must be dilated if possible by mechanical means." So it is not thought impossible for a hymen to be dilated sufficiently for labor to be completed.

CHARLES W. BROWN, M.D.

MANSFIELD, PENN., January 19, 1874.

OFFICIAL LIST

OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U.S. ARMY, FROM JANUARY 20, 1874, TO JANUARY 26, 1874, INCLUSIVE.

GIBSON, J. R., ASSISTANT-SURGEON.—Granted leave of absence for forty days. S. O. 2, Division of the South, January 20, 1874.

TAYLOR, M. K., ASSISTANT-SURGEON.—Assigned to duty at Fort Stockton, Texas. S. O. 8, Department of Texas, January 15, 1874.

SATURDAY, FEBRUARY 7, 1874.

ORIGINAL COMMUNICATIONS.

DIFFERENTIAL DIAGNOSIS BETWEEN PSORIASIS AND SYPHILODERMA SQUAMOSUM (SO-CALLED PSORIASIS SYPHILITICA).

BY LOUIS A. DUHRING, M.D.,

Clinical Lecturer upon Diseases of the Skin in the University of Pennsylvania, and Physician to the Dispensary for Skin Diseases, Philadelphia.

THE diagnosis between these two diseases is so often attended with difficulty that I shall, in the present communication, make the endeavor to separate the two conditions clearly and show wherein they essentially differ. Psoriasis and the squamous syphiloderm are both sufficiently common in a large community, the former disease, however, being unquestionably of much the more frequent occurrence. It is an affection which, when typical, possesses features highly characteristic and familiar to every one who has had opportunity of observing even a limited number of cutaneous diseases. I shall therefore not enter into any description of its characters here. I may, however, briefly state that it is a distinct cutaneous disease; with a definite and well-marked set of symptoms, the majority of which are almost always present. It is one of the most clearly defined of all the affections of the skin, standing forth conspicuously alone among the many other processes. Although it may coexist with other diseases of the skin, that is, be present while another affection of a different nature is at the same time running its course, yet it is never in any manner altered, but on the contrary always maintains its peculiar features intact. It never mingles or blends with other cutaneous affections thereby becoming disguised or unrecognizable. Psoriasis once, psoriasis always.

Syphilis of the skin likewise possesses many well-defined and unmistakable symptoms, but the varieties and forms of eruption are manifold, and require most careful consideration and diagnosis. They are not, however, involved in unintelligible darkness, but show themselves as a group of pathological lesions which, when once recognized, offer no further embarrassment. But it must be remembered, as stated in a recent lecture,* that these lesions are syphilis pure, unmingled with any other disease of the skin; they are the evidences of syphilis alone, and must be so estimated. For instance, with the squamous syphiloderm, the old so-called "psoriasis siphilitica," the only disease present is syphilis; although it might seem perhaps, from the term, as indeed has been represented by certain writers, that a trace or more of psoriasis existed. In brief, without entering into the subject further, I would state that psoriasis and syphilis are entirely separate diseases, and are never, under any

circumstances, influenced the one process by the other.

To a close observer there are many points of difference between a true psoriasis and a squamous syphiloderm, many of which, with attention and a certain amount of skill, can readily be distinguished and made available for diagnostic purposes. Some of these dissimilarities may, however, at times be slight or almost imperceptible, and this fact must not be forgotten when called upon to decide the diagnosis. As typical examples of any of the cutaneous diseases are exceptional and rare, it must not be expected that all of the characteristic signs of either of the two diseases under consideration will at any time be present. The fact also must be borne in mind that the diagnosis between psoriasis and syphilis is in reality one of the most difficult and delicate tasks in dermatology, demanding all the skill and power of observation which the student can command. The diagnosis often rests upon very slight variations. Errors in diagnosis between these diseases are common, nor indeed need this be a matter of surprise when we consider how trifling the difference must often appear to an unpractised eye. In speaking thus, it must be understood that we are dealing with objective symptoms only, those symptoms which the skin presents to the eye.

When a case offers itself for diagnosis the following points must be regarded:

Age of the patient.—Psoriasis is an affection which frequently manifests itself in childhood, at times as early as the sixth year, and remains with the individual to a greater or less extent for an indefinite period, at times months, but more commonly years. It is often seen in children at about the age of puberty. The most usual period for its first appearance, however, is in early adult life, at the age of twenty or thereabouts. It occurs also later in life, and in fact may first show its presence at any time from early childhood to old age.

Inasmuch as *acquired* syphilis is rare before adult life, we do not expect to find the squamous syphiloderm until this period. *Acquired* in contradistinction to *congenital* syphilis is here meant, these two terms being employed to denote respectively syphilis which has been obtained after the birth of the child and that which has been gotten in utero. As is well known, congenital syphilis also gives rise to a series of cutaneous manifestations, but if we except certain of the syphiloderms of infant life, it rarely if ever in later years produces any lesions resembling psoriasis. The squamous syphiloderm then is almost always confined to adult life and is the result of acquired syphilis.

Hereditability.—It not infrequently happens that we have an account of psoriasis being handed down from parent to offspring. At the same time I am inclined to think this transmission less common than is ordinarily believed. It is, without doubt, however, one of the diseases of the skin which may be transmitted from one generation to another.

There is no history of hereditability with the squamous syphiloderm. It may then in brief be

* Clinical Lecture upon a Papulo-squamous Syphiloderm, by the writer. *Philadelphia Medical Times*, No. 112.

stated that psoriasis is at times hereditary, but that the form of syphilis under consideration is never so.

Previous history.—In connection with a squamous syphiloderm there is usually some clue to the initial lesion, to the inoculation of syphilis. If this is not to be obtained, there is in most cases some account of subsequent or secondary symptoms, which it will be possible to elicit either by cross-questioning or by gaining the confidence of the patient. For this variety of syphilis is not one of the early exhibitions of the disease, but, on the contrary, is one of the late forms, showing itself six months or more and even years after the chancre. But too much stress must not be placed upon the history, for at the present day clinical experience teaches how serious errors are often incurred by relying upon the record of a patient. Observation has convinced me that many individuals have syphilis who have no idea that they are the possessors of this disease; much less do they know in what way it has been contracted. History here is of little value.

On the other hand, a clear and positive history of psoriasis is usually obtainable, especially if the patient have had the trouble for some time. The account of one attack of psoriasis is generally very similar to another, and it will be observed that patients give their story in a stereotyped and almost characteristic way.

Duration of the disease.—Psoriasis may continue for months or years, annoying the individual intermittently; or, in exceptional cases, it may remain present continuously for an indefinite period. The tendency of psoriasis is to recur at intervals through a lifetime. Occasionally it entirely disappears, and then suddenly bursts out again with full vigor. Relapses are the rule, particularly where the cure has resulted from external treatment alone. They may occur as often as several times in the course of a year. The great majority of patients who have been affected with psoriasis for some time will remark that they have had many relapses. A return of the disease does not necessarily show itself in the old locality, but may occur anywhere upon the skin.

The squamous syphiloderm, though very persistent and stubborn in its course, when once entirely removed by treatment, is not apt to return. It may last months or years, and, if only partially relieved, tends to relapse similarly to psoriasis. If some of the disease still remain when treatment ceases, it is prone to show itself again in the same place. The duration of the disease, therefore, must be accepted guardedly as being at all diagnostic of either affection.

General health of the patient.—The condition and general appearance of the patient will usually be of assistance in diagnosis. Exceptions there are here also, but, as a rule, psoriatic persons, and especially adults, bear unmistakable evidence of apparent good health. They are for the most part properly nourished; are well formed and developed in frame; are often stout and robust, with between the patches of psoriasis a clear, florid skin which has the look of typically sound tissue. The appetite is good, the functions of the body are usually in order, and

the individual appears to enjoy more than average fair health, with the exception of his skin trouble, and even this does not generally worry or harass his mind to any extent.

Now, it will be noticed that those suffering from a thorough absorption of the syphilitic virus, and this condition may be inferred whenever the squamous syphiloderm manifests itself, universally show signs of this saturation affecting the health. Their general condition is more or less involved, and very often in so marked a degree that syphilis seems stamped upon their physiognomies. The countenance has lost freshness and tone, and in place a sallow, dark hue pervades the face. The skin of the whole body is similarly changed and has parted with its normal, healthy tint. The patient likewise does not possess natural vigor or force of mind; he is indifferent, downcast, and perhaps hypochondriacal. The health is impaired, and nervous depression with other symptoms is not infrequently present. The contrast here to the general good health of the average psoriatic patient is usually striking.

Form of the disease.—Referring now merely to the *contour* of the eruption, psoriasis almost invariably assumes some definite pattern or outline. This uniformity of figure is quite constant, deviating only when the disease is very extensive and one patch has been merged into its neighboring companion. The form may be either round, varying in size from a pin-head to several inches in diameter, or in the shape of bands, running here and there, particularly over the region of the chest and back, forming elliptic curves or festoons. This latter form is also encountered in syphilis, but usually to a more limited extent. In psoriasis, however, whatever be the pattern assumed, it is everywhere the same. The form adopted in one part of the skin is seen wherever the disease exists upon the individual, whether it be the circular or linear form.

The patches of a squamous syphiloderm have no very definite tendency to form into a regular system of contour. They may take upon themselves any pattern as to outline and vary their shape according to locality or circumstance. There is, however, one peculiarity of form which, from the frequency of its appearance, must be regarded as more or less characteristic. This is a tendency to assume a semi-circular figure or the shape of a segment of a circle. If papules be present in any number they will invariably tend to group in this way. This form is more common upon the arms and extremities, or, where the disease is limited in extent.

Edges of the patch.—If the border of a patch of psoriasis which has been denuded of scales be inspected and examined carefully with the finger, it will be noticed that there is no abrupt line or edge present, but that the surface gradually fades away into the sound skin, without perceptible line of demarcation.

In the syphiloderm the patch is usually elevated and possesses a marked and raised line of limit. The disease does not glide imperceptibly into the healthy skin, but terminates abruptly. This border may often be detected by passing the finger over its surface. It is the line of the plastic syphilitic

deposit. When it invades the palm, it is less definite than upon other parts of the body. The edges here are only slightly raised, but are ordinarily encircled with a film-like, shrivelled scale. In psoriasis the elevation of the patch is due to the scales, which exist in such quantity. If these be thoroughly removed, we come at once upon a red, shining surface, not much, if at all, elevated above the level of the surrounding healthy skin.

Symmetry.—Psoriasis has a decided tendency to occur symmetrically upon the various regions of the body. When present upon one side, it is the rule to find it on the corresponding part. When existing upon one limb, it is usual to find it upon the other.

This observation does not apply to the syphiloderm, for rarely do we find that it disposes itself with any degree of symmetry, excepting in connection with the palms or soles, and even here it is subject to variation.

Regions of the body involved.—No part of the skin possesses immunity from psoriasis. The same remark applies equally to syphilis. At the same time, there are certain lines which experience enables us to draw, and which may be here referred to. Psoriasis inclines to involve a large portion of the surface at the same time. The squamous syphiloderm rarely does.

Psoriasis is an exuberant product. Syphilis is apt to be scant. Psoriasis attacks remote parts of the body at the same time, as for instance, the head or upper extremities and the lower limbs, or, the whole skin at the same time may be the seat of the disease. A favorite locality for psoriasis to make its appearance is upon the elbows and knees. If it occur upon either the knees or the elbows it is apt to appear upon both knees or both elbows simultaneously. In a large number of cases it is present, to some extent at least, upon the localities just referred to. The disease is prone to make its first appearance here.

The syphiloderm generally confines itself to one portion of the body. The upper and lower extremities are not often affected at the same time. The amount of surface involved is usually small and limited in extent. Although it is the exception to see large tracts of skin attacked, nevertheless occasionally the disease spreads extensively, forming patches the size of a hand and much larger.

The syphiloderm rarely occurs upon elbows or knees; still more rare is it to find these regions symmetrically affected. With the exception of elbows and knees, psoriasis has no predilection for any particular portion of the body, and is as frequently seen upon various parts of the trunk as upon the extremities, and vice versa. The syphiloderm inclines to show itself on certain portions of the body rather than upon others. It is more commonly seated upon the chest and abdomen, about the shoulders and arms, upon the forehead and scalp, and upon the palms and soles.

Palms and soles.—Both psoriasis and syphilis may attack these regions. Psoriasis may appear exclusively upon either the palms or the soles, the rest of the body remaining entirely free. In like

manner syphilis may show itself upon either the palms or the soles, no other symptom of the disease being anywhere else present. The syphiloderm may also appear upon both palms and soles; upon palms or soles alone; or, as is often the case, upon one palm or one sole alone. When psoriasis invades the palms or soles, it is usual to find it upon other portions of the body at the same time. When syphilis attacks the palms or soles, it is the rule to find no trace of it on other parts of the skin. It is not uncommon to find either disease upon one palm or sole only.

First symptoms.—Psoriasis may be attended with certain acute and inflammatory symptoms, for example, itching, tingling, burning, and other disagreeable sensations. Itching, to a greater or less extent, is generally present with psoriasis. This symptom is often especially annoying at the commencement of the affection.

Some itching may also exist with the syphiloderm, particularly if located upon the trunk; but it is never sufficiently active to cause the patient to scratch; nor is it at all comparable to that of psoriasis. A beginning syphiloderm does not itch, whereas, as just remarked, a commencing psoriasis generally does. Psoriasis is usually an active disease in its early development and progress. It not infrequently extends rapidly, and in a short period may occupy a great portion of the skin. Syphilis on the other hand increases its area step by step and at times extends very slowly.

Pathological characters.—The pathological characters of psoriasis and syphilis are essentially different. Syphilis always manifests its presence in the form of a deposit or infiltration in the tissue. This pathological feature is always present and is very often marked. In psoriasis there is no deposit or infiltration of new material into the corium. The disease consists simply in a hyperplasy of the cells of the rete, attended with peculiar inflammatory symptoms. This difference in the pathological structure of the patches is generally appreciable even to the naked eye, and constitutes one of the most valuable diagnostic signs between the two diseases. Exclusive of the scales, there is very little thickening of tissue in psoriasis. In syphilis there is decided thickening of the skin, and it can in most cases be detected without much difficulty; it varies in degree, however, according to locality and other circumstances. Upon the palms it is least marked. It is in this region that the two diseases most simulate each other, and where diagnosis often becomes most difficult. In these cases the skin should be taken up by the fingers and delicately examined before an opinion is pronounced, for it is not infrequently by this means alone that a correct estimate of the amount of thickening present can be obtained. Attention and care are requisite in order to discriminate between the thickening due to inflammatory swelling and puffiness, and that arising from the gradual plastic deposit of syphilis.

The syphiloderm may consist of more than one kind of lesion, a variety being at times observable, composed of papules, ulcers, and scales. Papules are frequently found, and may be scattered here

and there, or, as is more generally the case, aggregated in small groups placed in semicircular form. They may be covered and disguised by thin, whitish scales; or, they may be free of scales and prominent to view. They are inclined to be rounded or flattened at their apices, and not acuminated.

Now, in psoriasis there are never any papules present. The disease always shows the same pathological characters, which are pathognomonic of the affection. A patch of psoriasis consists of a circumscribed, inflammatory, red, even surface, which is always found covered with scales.

The patch of syphilis may consist of a uniformly diffused infiltration, or it may be composed of a number of aggregated papules which have coalesced, making an irregular uneven surface, sparsely and imperfectly covered with dried epidermis.

Color of the disease.—The color of a spot of psoriasis depends very materially whether it is viewed with the scales upon it or whether they have been mechanically removed. As seen clinically, usually with a certain quantity of scales adhering to the surface, the patch possesses a whitish-gray color with reddish edges. Denuded entirely of scales it has a florid red or pink color, especially if upon the trunk or upper extremities. Upon the lower limbs, palms and soles, the tint is always several shades darker.

The syphiloderm is less vivid and bright in color and has a lurid, dirty-reddish aspect; it has a dead hue and has been well compared to a section of raw ham. The scales are so few that they do not disguise the color of the true skin.

Character of the scales.—The scales of psoriasis are always produced freely and in great abundance. In syphilis they are formed very slowly and are exceedingly scanty. This point of difference is perhaps one of the most valuable of all the symptoms for diagnostic purposes. It is one about which there is less likelihood of being in error than any other. In psoriasis the scales are loose and non-adherent, the more superficial of which are readily detached from their bed. In syphilis they are thin and adherent, and stick closely to the tissue beneath. The scales of psoriasis possess a silvery whiteness; they have a glistening, nacreous or mother-of-pearl lustre.

The scales of the syphiloderm always have a yellowish, dirty-white look. The scales of psoriasis have the appearance of being new and fresh as if they had been recently formed. In syphilis they have an old, dingy, dried and shrivelled look.

The scales of psoriasis are imbricated, overlapping and fitting over one another like tiles upon a roof. In syphilis they are not imbricated, but are thin, covering the tissue beneath scantily like a transparent membrane.

In psoriasis the scales form rapidly, and in appreciable quantities from day to day. The patient retires at night with the patch thoroughly free of scales and awakes in the morning to find them again present in numbers. The rapidity with which they are ordinarily created is astonishing.

In syphilis they are produced very slowly, through

a period of days or weeks, and even then are but scanty and ill-formed.

If a patch of psoriasis be scraped and denuded of its scales, as for instance by scratching with the nail, the surface beneath will appear bright red in color and somewhat glistening. If the scratching be continued a step farther, the patch readily gives out minute, pin-point-sized jets of blood, springing directly from the apices of the lacerated papillæ of the corium. The derma bleeds very easily. On the other hand, on account of the great deposit of new material, the syphiloderm patch can be rubbed and scratched to a much greater extent without causing bleeding and laceration of the papillæ. In psoriasis the patch is intensely hyperæmic; in syphilis it is only so to a certain extent.

Ulceration.—A cardinal point to be remembered in connection with the history of psoriasis is, that it is never attended by ulceration or moisture of any kind. From the commencement to the end it consists in the production of the same dry, whitish scales, which are continuously cast off in such voluminous quantities. Moisture is never present in any stage of the disease. If the patch have been very much irritated by scratching or external applications, blood in small quantity will appear, but this soon passes off and the old process of scale formation goes on as before.

In syphilis, where there is always a tendency to more than one kind of lesion, a slight degree of ulceration may at times be present. Papules may break down and a loss of tissue be the result, which fact alone would be of sufficient value to determine the diagnosis. Psoriasis leaves no trace of its previous existence except a deposit of pigment in the skin, which in the course of a few months entirely disappears. If no ulceration have been present the syphiloderm leaves likewise only a pigmentation, which, however, is much deeper in color and more persistent in its duration than that of psoriasis.

Effect of treatment.—Psoriasis is often completely relieved for the time being by external treatment, whereas in syphilis local treatment is of little permanent benefit. Psoriasis is influenced decidedly at times by the preparations of iron or arsenic, neither of which exerts any special effect upon syphilis. The syphiloderm is changed and entirely relieved by the preparations of mercury or by the iodide of potassium. In this connection it must not be forgotten that the variety of disease we are considering is perhaps the most obstinate of all the syphilitic manifestations, calling for most judicious treatment. Time is here required to bring about the desired result.

In conclusion I desire again to say that the differences which it has been my aim to set forth as existing between the two diseases, are not infrequently very imperfectly defined; differences which at times it is difficult to describe intelligibly, and which can only be appreciated after a certain amount of clinical experience. Due allowance must therefore be made for the irregularities which are so often encountered in the study of these two conditions.

CURIOSITIES OF COUGH.

Reported to the Medical Library and Journal Association, December 12, 1873.

BY L. ELSBERG, M.D.,

Professor of Laryngoscopy and Diseases of the Throat in the University of New York.

(Continued from page 263.)

IV—MEETING Prof. Weisse in a railway-car one day last summer, he told me of a very curious case of cough he had seen; and on August 11, Dr. Leroy Satterlee placed the patient, young Miss F. H., of Rochester, in my care. She was eleven or twelve years old, obviously precocious in both body and mind, seemingly in excellent health, but extremely nervous. Since the month of May she has had a peculiar affection of the upper air-passages, which consists in a spasmodic paroxysm, every little while, of several wheezing, expiratory efforts. These wheezings have become more frequent in number in each paroxysm, and the paroxysms also occur at shorter intervals. They happen irregularly, but often every few minutes, and now usually eleven or thirteen times in each paroxysm. They are very curious in this, that the expiration of air is broken up into a number of panting or whistling wheezings, which cannot be described in words.

It struck me at once that there was no vocal sound heard in the paroxysms, and that the larynx was therefore probably free from disease. Examination confirmed this: I found the sides of the pharynx swollen, spongy, and flabby, the tonsils and the infra-tonsillar glands enlarged and nodulated, the mucous membrane in the neighborhood of these glands infiltrated and degenerated. On experimentally irritating this membrane by touching it with a sponge dipped into a solution of persulphate of iron, the paroxysms were induced, as I predicted they would be, with greater vehemence and frequency; while on removing portions of the tonsils and of this tumefied mucous membrane, these peculiar paroxysms, that had resisted all internal alterative and antispasmodic treatment for months, ceased.

A further curious feature in this case is the development of chorea. I saw her last on the 20th of August, when she bade me good-by, and was so happy and grateful for her cure that I had to calm the fervor of her expressions. She spoke in a nervously-excited manner of what she had passed through, the various medicines she had taken, and the operations she had undergone. I requested her mother to give her no more medicine, but to keep her very quiet, with proper nourishment, exercise, etc. In the afternoon of the same day (this was Wednesday, and I am now about to quote from her father's letter, dated September 5) "she became intensely nervous and very weak. This grew rapidly upon her, and the next day her limbs and body also twitched and shook as if she were under the influence of a continuous electric shock. On Saturday we brought her home in a very exhausted condition. We waited some days, in obedience to your request that she should have no medicine, and also in the hope that rest and home-nursing would soon bring her around. But her twitching and jumping grew so fearful that we called in Dr. Dean, who at once pronounced the case St. Vitus's dance."

V.—The kind of cough now to be described, although peculiar, is less rare and strange than any of the preceding. It is a harassing, husky, whistling cough, which, once heard, is not easily forgotten. From its sound we may know that it comes from the larynx, and that something, either a me-

chanical obstacle or muscular paralysis, prevents the vocal bands from coming into apposition. Whenever we hear it, especially in connection with a peculiar husky voice, we may make a guess at the alternate diagnosis before laryngoscopical examination.

As characteristic instances, though not as rarities, I may relate the following cases:

F. O., German; æt. 25; unmarried; carpenter; residing nine years in New York; of healthy family, especially as to lung- or throat-disease; always enjoyed good health until two years ago. Since then an exceedingly troublesome cough gradually developed itself, without any cause so far as he knows. Soon after, he noticed that his voice was becoming hoarse. He thinks that the hoarseness came on later than the cough, although he might have overlooked it at first. At all events, at present his voice is quite husky, the cough exceedingly harassing, and the peculiarity of voice and cough above referred to is very well marked. The hoarseness has for some time been exactly as it is now; it does not change; but the cough ordinarily is less severe for several weeks or even months, and then "on taking cold" becomes worse. For over a week it has now been more troublesome than ever it was before. In the intervals of coughing he frequently makes a peculiar and noisy effort to clear the throat, without, however, any expectoration.

The patient has never had venereal disease; his general health is rather poor; he has but little appetite, and is inclined to suffer from indigestion and costiveness. I omit the further details of his condition stated in my note-book, except to say that his lungs are healthy. He complains of no pain in the region of the larynx, but experiences occasionally a fullness, especially in changes of the weather. The laryngoscope showed a small, white, conical excrescence at the posterior wall of the larynx, just inside of the inter-arytenoid fold.

Mrs. L., æt. 36 years; mother of five children; generally enjoyed good health until two or three months ago, when she noticed some difficulty in swallowing liquids, more especially warm soup or cold water. Gradually she became hoarse and affected with a cough, such as I have described. Now the cough is very frequent and troublesome, and hoarseness and dysphagia continue. It is characteristic in this case that she can speak or even sing falsetto notes clearly, but the moment she attempts to use her chest voice the husky squeak comes in. The laryngoscope showed partial paralysis of the vocal bands.

(To be continued.)

ON THE COMMUNICABILITY OF SYPHILIS AFTER IT HAS BEEN APPARENTLY CURED.

BY H. E. WOODBURY, M.D.

WE propose to discuss briefly in this paper the following questions: *First*, Is syphilis a curable disease? *Second*, If so, how shall we determine when the disease is eradicated? *Third*, Can a person who has been apparently cured communicate the disease?

I. Constitutional syphilis results from the introduction of a specific poison into the circulation. It matters not at what point this enters, the result is all the same. There is a period of incubation varying in duration, according to the peculiar con-

dition of the system or the idiosyncrasy of the individual.

During this period the poison is producing its morbid influence upon the blood, which, when completed, manifests itself by certain peculiar and unmistakable indications. In order to answer the first inquiry, we have but to consider whether it be possible in any case to remove a poison from the blood. We all know that many derangements—a large class of diseases—result from this cause,—a blood-poison. Thus, we speak of the fever-poison, the cholera-poison, the poison of yellow fever, etc. The fact that certain types of fever, and the exanthemata which have their origin in a vitiated condition of the blood, as evidenced by the eruption,—an attempt on the part of the system to eliminate the poison through the surface,—are controlled by proper treatment, goes to prove that nature always strives to eject the enemy; and we may greatly assist her in the oftentimes unequal conflict.

Dunglison, in his definition of virus, says, "We speak of the variolic, vaccine, and syphilitic viruses," thus placing these several types under one common head, so far as their action is concerned. Now, as we well know that the variolic poison may be successfully combated, no injurious taint remaining after the patient recovers, and as the vaccine poison wears itself out after a time, as re-vaccination sufficiently proves, may we not naturally enough conclude that the syphilitic will yield to a judicious course of treatment? We would by no means underrate the *vis medicatrix nature*,—an aid the practitioner should never ignore, for nature is our faithful ally in all such cases. But we should undoubtedly aim to assist her in the good work by the administration of such remedies as experience has shown have a tendency to aid in the elimination of the poison. Our own experience and observation, confirmed by that of others whose opportunities for studying this disease have been most favorable, lead us to the firm conviction that syphilis is a curable disease; that it may be so completely eradicated by a thorough course of treatment that, while the syphilitic diathesis may still remain, the subject of it will suffer no inconvenience therefrom, unless he is subjected to unusual exposure, hardship, or privation, or leads a reckless and dissipated life.

II. How shall we determine when the disease is eradicated? This is a question of great importance, for upon its correct solution the health and happiness of others besides the patient may in a high degree depend. A hasty or careless answer should never be given in such a case. So long as any one indication of the disease remains, we may be sure that our patient is not exempt from future trouble. The treatment in these cases must be prolonged for months after every symptom has disappeared, taking care to keep the system of the patient in an above-par condition during the latter part of the course, by the administration of tonics and a generous and nourishing diet.

When such a plan has been persevered in for several months after every indication of the disease has disappeared, we may, I believe, be justified in pronouncing the case cured; but we should care-

fully examine and satisfy ourselves that no symptom of the disease remains before we give such an opinion. Can we err in so doing?

III. Can a person who has undergone a thorough course of treatment, and has been apparently cured, communicate this disease to another? If the statements of the parties in the case we are about to report could be depended upon,—and these statements seemed to be made in good faith,—the affirmative would be proven. The facts and statements we give, vouching only for the facts so far as they came under our immediate observation.

Case.—Mr. —, a widower, aged 40, by occupation a tinner, called on me in the spring of 1870, and desired me to cure a large indurated chancre that was very troublesome to him. I applied acid. nit. to the ulcer, ordered a lotion, and told him that secondary symptoms would undoubtedly follow. In about six weeks headache, sore throat, syphilitic roseola, enlargement of the post-cervical glands, etc., proved my prognosis. He was at once put upon a mercurial course, and in a short time the symptoms yielded. Mercurials and the iodides were taken perseveringly for seven or eight months, when the only symptom that remained was a few mucous patches on the tongue. These were mopped with a solution of argent. nit., and, although somewhat persistent, after a time disappeared. On account of them, the treatment was continued for more than a year longer, making the whole course of treatment a little less than two years. Among the remedies used were hydr. protiodid., hydrarg. chlor. corros., potass. iodid., calcii iodid., Fowler's solution, syr. ferri iodid., and the bitter tonics. For many months before the suspension of treatment, not one trace of the disease was apparent.

Some months after this (in the summer of 1872), the man called to ask me if I thought it safe for him to marry. I examined him, and, finding no indications of the disease remaining, save the cicatrix of the chancre, expressed myself affirmatively. Soon after, he was married. And now comes the peculiar feature of the case. About two months after his marriage he wished me to call and see his wife, who was suffering from a painful sore on the genitalia, and who had, as he expressed it, "very suspicious symptoms." I did so. An examination satisfied me at once as to the nature of the case, but I hesitated to give a decided opinion. Three other physicians saw the case. One of these entertained the same opinion that I did; the others were not quite sure, and reserved their opinion, probably from prudential motives. The woman declared that she was, and ever had been, a chaste woman, and that the disease was contracted from her husband. On the other hand, the husband stated that he had not exposed himself since he contracted the disease, two and a half years before,—not after he was apparently well. An examination of the husband was made at the time his wife was affected, and no indications of the disease could be found, although he had cohabited with her regularly from the date of his marriage up to that time.

About four months later, the husband presented himself with a characteristic syphilitic ulcer on his leg, about as large as a half-dime. He had no other symptom, and had not suffered from a fresh or recent chancre.

This case would be instructive and valuable if the statements of the parties could be verified. It would prove that no course of treatment, however thorough, affords perfect immunity from this disease in the future. Bumstead (p. 523) says, "Those who have enjoyed the greatest facilities for observ-

ing the effects of treatment are nearly unanimous in the opinion that absolute security can never be attained." But in cases where treatment long continued fails to cure, should we not expect to find some indications of a relapse, ere the disease could be communicated? Can a poison so latent as in this case, where no indications of its presence remained, possess infecting properties? If so, we have yet some things to learn as regards the pathology of syphilis.

In the report of Columbia Hospital, D. C. (p. 118), may be found the record of a similar case. But the husband had suffered from what he called "rheumatic pains in his bones," and the wife never had a primary sore. Langston Parker gives two instances in which the secondary taint was communicated to the wife by the husband, no primary lesions being present. Now, we freely admit that secondary lesions are communicable, but we cannot believe that a chance would be the result, for in both of Dr. Parker's cases we are informed "the wives had almost precisely the same symptoms that were developed in the husbands."

We have brought this subject before the profession in the hope that if any one has met with such a case (both of the parties being reliable) he would give it publicity. We can only add that in this case *some deception must have been practised or some mistake made*, as we verily believe. Speaking of it to a medical friend in New York,—a gentleman of experience and research in such matters,—he informed us that he had met with such cases, but always succeeded in clearing up the seeming mystery in which they were involved, before his treatment terminated. It is unfortunate for us, owing to the nature of the disease and the culpability or even criminality that may attach to it, that all the statements of parties implicated must be taken *cum grano salis*, for otherwise we should have but little difficulty in arriving at a true knowledge of the phenomena that characterize in all of its gradations that persistent and loathsome disease, constitutional syphilis.

WASHINGTON, D. C., Nov. 10, 1873.

A CASE OF DROPSY OF THE LEFT PLEURA CURED BY THE USE OF LAXATIVES AND DIGITALIS.

BY C. P. ALLEN, M.D.

ON the 15th of September last I was called to the village of Ulster, a distance of eight miles, to see a little girl. From her mother I learned the following history of the case:

The patient was six years of age, and had always been a fleshy, healthy child until the last six weeks; during which she has been losing flesh and drooping without complaining of pain, but her breath was very short, especially after even slight exertion. She was also unable to lie on her right side, because she could not breathe. The day previous to my visit, while at a dressmaker's, it was observed that the left side was larger than the right. This discovery, in connection with the shortness of breath and decline, induced her parents to call me to see her.

On examining the patient, I observed the left side had a rounded form, the intercostal spaces bulged, and there was very little motion of the chest in respiration. The left side measured three-fourths of an inch more than the right side. The heart was seen and heard beating to the right of the sternum. The whole of the left side was dull on percussion from base to apex. No respiratory sound was audible over any portion of the side, and dulness was observed beyond the median line.

On the right side the resonance was normal, and there was puerile respiration. Pulse 130, respiration 36. The child had evidently lost considerable flesh, but was not greatly emaciated; yet her countenance wore a tired and anxious aspect. Her step was slow and measured, bowels slightly constipated, skin dry, urine high-colored and a little below the natural quantity.

Here we had evidently to deal with a very copious effusion of liquid in the left pleura, that had stolen upon the patient without any known cause. I considered this a proper case in which to use the aspirator for the removal of the fluid, but, having no instrument for that purpose with me, and being several miles from home, and the symptoms not demanding immediate relief, I determined to give her laxatives and diuretics a few days and observe the effect. Two grains of hydrargyrum cum creta were prescribed to be taken three times a day, and it was ordered that the left side should be kept constantly enveloped with flannel wrung out of hot water.

On the 17th I visited her again, and found the bowels had moved several times, and were still rather loose. Other symptoms about the same as when seen last. Prescribed four drops of tincture of digitalis every six hours, and continued the use of hydrargyrum cum creta at night when the bowels were not sufficiently free; fomentations as before.

26th.—I visited the patient again, with the expectation of drawing off the fluid by aspiration, but, on examining her, found that she had had rather a copious action of the kidneys, and that her respiration was reduced to 26, and her pulse to 115. The heart was heard under the sternum, and respiration was audible, though not natural, at the apex of the lung.

Treatment continued as before. Two weeks later I found the respiration nearly normal, pulse 80; the heart had assumed its natural position, but a little dulness was heard at the lower part of the pleura. Respiratory murmur not quite free. The lung was evidently still suffering to some extent from compression, but was rapidly regaining its normal function. Her appetite was good, and she could lie on either side without dyspnoea. The continuance of the digitalis was advised, morning and evening.

I have not seen the patient since, but was informed by an aunt of the little girl to-day, December 15, 1873, that she had become quite well, and was as strong and healthy as before her sickness.

The above case is interesting in at least two things. First, the insidious manner in which the disease made its appearance, and the amount of effusion without pain; second, the ready manner in which it yielded to gentle laxatives and digitalis.

I am well aware that serous membranes pour out serum very readily, but in most instances where there is irritation or slight inflammation sufficient to produce effusion in the pleura, more or less acute pain is felt in the side.

I have always found it difficult to remove effusions in closed cavities and cysts by means of laxatives and diuretics, or at best the process is a very slow one.

In a case of large effusion in the pleura, it is very

readily understood why it is so. The lung is greatly compressed by the fluid, so that little or no air enters it, and the blood-vessels are in a congested condition. The sound lung is more or less congested and compressed by the over-distention of the opposite pleura, and it is well known that this condition is unfavorable to absorption. Another reason is that coagulable lymph is very apt to coat over the pleura and thus render absorption slow and difficult.

In the above case, the probability is that very little lymph had been effused, the inflammation having been so mild in its character, and that the laxatives given relieved the bowels and portal system by a direct action, and the blood-vessels of the chest by a secondary action, thus favoring the effect of the digitalis as a diuretic and the accompanying relief of the effusion.

We have often found very marked relief from the use of digitalis in anasarca of the legs with or without effusion in the peritoneal cavity, occurring in elderly people having a quick and feeble pulse, with atony or enlargement, and dilatation, of the heart.

ATHENS, Penna.

ELECTRICITY IN THE TREATMENT OF CHILBLAIN.

BY ALONZO L. LEACH, M.D.

PERHAPS no disease so simple in its origin and pathology is so difficult at times to cure as chilblain. At this season of the year every physician's office presents its cases. It has seemed to me that the various plans of treatment recommended by different authors are but temporary in their results. I have found ordinarily the liq. iod. comp., and aq. ammon., in equal parts, as recommended by Dr. Balfour, of the Royal Military Asylum at Chelsea, the most marked in its action.

Last winter, while treating a number of cases, it occurred to me to try the influence of electricity. I accordingly applied the secondary or induced current, and the result fulfilled my anticipations. This winter an aggravated case, of long standing, in a gentleman of this city, presented itself to me, and I pursued this mode of treatment: the relief afforded was so decided as to leave no room for doubt in my own mind of its efficacy.

We have, as the ultimate result of frost-bite, a partial or complete paralysis of the vessels, as well as a nervous element, evinced by the pain and intolerable itching. Electricity tends to give tone to the parts and restore them to their normal condition. This is the result sought for in all applications, but they only do so temporarily in a majority of cases. The cause reappearing, the pathological condition still remaining, we have a return of all the symptoms. I am convinced, from the success met with in those cases where I have used it, that electricity, applied for a period of time every day, or at longer intervals, as the case may be, will place the parts in a healthy condition and effect a permanent cure.

NOTES OF HOSPITAL PRACTICE.

BELLEVUE HOSPITAL, NEW YORK.

SURGICAL CLINIC OF PROF. JAMES R. WOOD.

Reported by F. W. CHAPIN, M.D.

CASE OF STONE IN THE BLADDER—BILATERAL OPERATION.

J. M., 47; male; Ireland; bricklayer. Patient was wounded in the late war, in 1863, and had paraplegia for some weeks in consequence; has recovered almost entirely. He denies having had venereal disease; has been a hard drinker. Fourteen months before admission he noticed on passing his water that it was tinged with the color of blood. About this time, also, he began to be troubled at times with incontinence of urine. By-and-by he noticed that often when he wished to pass his water he could not, and that, after waiting, it would begin to flow and soon suddenly stop. This sudden stoppage was always accompanied with severe pain at the end of the penis. The desire to urinate became very frequent at last, the patient being forced to make his water every few minutes. At this stage he was admitted to the hospital, December 18, 1873.

On admission, he was a healthy-looking man. He complained of pain in the bladder and perineum; a heavy, dragging sensation in the groin; sharp, lancinating pain extending from the groin to the end of the penis; all increased by riding in the horse-cars or by being jolted in any way. The pain at the end of the penis was always severe towards the end of micturition, and much more so after the act. He occasionally had sudden stoppages of the flow during micturition, as formerly. Severe pain accompanied these stoppages, and during the efforts to void the bladder there was often marked vesical tenesmus. The urine was passed every five or ten minutes, and contained blood, pus, and oxalate of lime.

December 20.—Examination of the urine showed considerable albumen and some pus.

Patient was this day etherized, the perineum shaved, a staff introduced into the bladder, and the stone felt, first by Dr. Crosby and then by Dr. Wood. Being thus sure of the presence of a calculus, Dr. Wood performed his favorite operation, the bilateral, making a curvilinear incision crossing the perineum an inch in front of the anus, and terminating on each side in the ischio-rectal space, midway between the anus and the tuberosity of the ischium. Through this incision the staff was reached just in front of the prostate. The point of Wood's bisector was then held in the groove of the staff, the handles of the staff and bisector approximated, and the bladder entered. A mulberry calculus was removed about half an inch in diameter and of a rough, uneven surface. Very little hemorrhage followed. The patient's testicles were lifted away from the wound by means of a broad strip of adhesive plaster passed under them and around the thighs. His legs were tied together, and he was put to bed. This is the ordinary dressing and immediate after-treatment used in the hospital in uncomplicated operations for stone. At the close of the operation Prof. Wood remarked that he had accomplished two very desirable objects. In the first place, he had removed the stone, the cause of all the distressing symptoms; and in the second place, he had put the patient in a way to get well of his cystitis, for he had removed the cause of it, and had put the inflamed organ at rest and freed it from further contact with decomposing urine, by making an opening through which the urine might escape from the bladder as fast as it entered it.

3.30 P.M.—Patient complains of severe pain on passing his water through the perineal wound.

Ordered McMunn's elixir, \mathbb{M}^{x} l.

4 P.M.—Pulse 84; resp. 20; temp. 98°.

December 21, A.M.—Pulse 78; resp. 21; temp. 96½°.

No hemorrhage had occurred since the operation. Immediately afterwards patient passed a small quantity of urine by the urethra. Since then the quantity passed in this way has steadily increased, and he now passes considerable by the urethra.

4 P.M.—Pulse 88; resp. 23; temp. 98½°.

December 22, A.M.—Pulse 84; resp. 24; temp. 99°.

Patient passed the greater part of his urine by the urethra. Wound is looking well.

4 P.M.—Pulse 92; resp. 30; temp. 99°.

December 23, A.M.—Pulse 84; resp. 23; temp. 97°.

Wound suppurating. Granulations somewhat pale.

P.M.—Pulse 80; resp. 20; temp. 97°.

December 24, A.M.—Pulse 84; resp. 24; temp. 97°.

" " P.M. " 90 " 24 " 97½°.

" 25, A.M. " 96 " 23 " 96°.

" " P.M. " 90 " 30 " 97°.

" 26, A.M. " 96 " 23 " 96°.

" " P.M. " 98 " 22 " 98½°.

Patient's bowels have not moved since the operation.

Ordered a stimulating enema.

December 29, P.M.—Patient's pulse, respiration, and temperature have remained about the same as at last note. General condition excellent. Appetite good. Bowels regular. He has had no pain except when urine passed through the wound. To-day he has for the first time passed all his urine through the urethra. He sleeps well.

January 7, 1874.—Since the 29th ult., patient has passed all his urine by the urethra. The wound is fast closing up, and looks healthy. The urine contains some pus and albumen still, but a less amount of each than before the operation. Patient's general condition is all that can be desired.

TRANSLATIONS.

THE GROWTH OF MUSCULAR FIBRE AND OF THE MUSCLES IN THE FROG.

DR. PETROWSKY (*Centralblatt f. die Med. Wissenschaften*) proposed to himself two questions to be solved by his investigation:

1. What histological changes in the muscular fibre took place while the frog grew from the tadpole condition to a length of eighty mm.; and 2, whether in this period of time any new growth of muscular fibres occurred.

His observations were made upon muscular tissue, the fibres having been treated partly by diluted acetic acid and glycerin, and partly by acetic acid alone, and then teased out. Transverse sections were made of dried muscle, and treated with the same fluids. He found that at the termination of the tadpole period the muscles consisted of spindle-shaped fibres with oblique striations on the periphery, while in their middle was found a row of large oval nuclei. They possessed as yet no sarcolemma, and were closely surrounded by spindle-shaped nucleated cells. Among these fibres are found some which have nuclei also on the surface, and which are not entirely covered by the obliquely striated matter, but are only thrust into it, while on the periphery they are lost in a thin boundary-line which forms the commencement of the sarcolemma. These nuclei are at some distance asunder, so that but one or two are visible in one field of the microscope. In very small frogs having a length of but ten mm. the fibres named above are in excess, but the peripheral nuclei are more numerous, and groups of two or three nuclei

are found lying in a line parallel to the axis of the fibre. When these fibres are torn, the existence of a sarcolemma can be demonstrated. The peripheral nuclei are attached to the sarcolemma, and are partly oval, but for the most part appear as sharply-defined bodies, like little bars, with their long axes parallel to the axis of the fibre. They are also found free in the field of the microscope. This same form can also be found among the nuclei of the row at the axis of the fibre after the addition of concentrated acetic acid. This change is especially distinct in the muscular fibres of the house-fly and in those of the head of the frog. By adding concentrated acetic acid to a preparation of muscular fibre prepared by teasing upon a microscopic slide, the change from the oval form could be seen in progress. This second form is simply the first or oval nucleus seen in profile.

The length of time during which the fibres remain in this condition varied in different frogs which were the subjects of examination. When the frog had grown to a length of thirty mm., still further changes took place. The axial row of nuclei vanished, as well as most of those on the periphery of the fibres, and in their places appeared rows upon the periphery which were arranged parallel to the axis of the fibres.

By a transverse section they were found lying under the sarcolemma, although but few of them seemed to have any connection with that membrane.

No observations were made which appeared to justify the assumption that the rows of nuclei found upon the surface of the fibres had their origin in those previously observed in their axes.

In addition to these changes, in some cases it appears that a growth of the muscles caused by a new growth of fibres takes place. In making an examination of the entire gastrocnemius muscle, all the forms described above were found, from the earliest up to those characteristic of the muscles of the full-grown frog; but no evidences were found of growth due to splitting of already developed fibres.

From his observations, Dr. Petrowsky drew the following four conclusions in regard to the growth of muscle in the frog:

1. In the tadpole period, the muscle consists of spindle-formed fibres with a row of oval nuclei in the centre. There are no sarcolemmæ or peripheral nuclei existing.

2. On the periphery of most of the muscular fibres, when the frog has attained the length of ten mm., sarcolemmæ and nuclei make their appearance. These nuclei look like little bars, but are really oval seen in profile.

3. The central row vanishes, and most of the peripheral nuclei free themselves from the sarcolemma, increase in number by division, and arrange themselves upon the surface in rows parallel to the axis of the fibre. The increase in size of the muscular fibres is proportional to the increase in number of these peripheral rows.

4. The formation of new fibres assists in the growth of the muscles, but this new formation is not due to division of pre-existing fibres.

WILLIAM ASHBRIDGE, M.D.

DISCHARGE OF ASCARIDES FROM THE URETHRA.—Prof. Dujardin reports the passage of three ascarides from the urethra of a man 72 years old. The passage of these parasites occupied ten days, and occasioned the patient much suffering. The specimens are preserved in the anatomical museum at Genoa.—*Boston Medical and Surgical Journal*; from *La Nuova Liguria Medica*, No. 18, 1873.

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 MEDICAL AND SURGICAL SCIENCE.

The Philadelphia Medical Times is an independent journal, devoted to no ends or interests whatever but those common to all who cultivate the science of medicine. Its columns are open to all those who wish to express their views on any subject coming within its legitimate sphere.

We invite contributions, reports of cases, notes and queries, medical news, and whatever may tend to increase the value of our pages.

All communications must bear the name of the sender (whether the name is to be published or not), and should be addressed to Editor Philadelphia Medical Times, care of the Publishers.

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EDITORIAL.

SOME OF THE USES OF HOSPITALS.

A GOOD deal has been said, and with more or less reason, as to the direct relations of hospitals to the community in this city, and especially as to the mode of their management and the grave defects under which some of them labor. We, as doctors, have felt keenly, and, where men dared to do it, have plainly pointed out, the errors into which the managing boards of laymen fall.

Perhaps a hundred physicians and surgeons in this city devote their many hours of unpaid work to the care of the sick in our hospitals, and yet scarcely once in years is there an example of neglect or want of care. Nay, more,—no sick people in any land are treated with more courtesy or steady kindness than that which marks the bearing of hospital physicians in this city to their suffering fellow-beings. We say this the more freely because a manly and tender consideration for the sex and the feelings of hospital patients is often wanting in France and Germany; and we say it, too, the more freely, since we are about to call the profession to account for defects which do not exist in Europe. What direct value to the community hospital-wards possess, is plain enough. What indirect value they should have will depend upon the tendencies, training, organization, and capacity of their staffs, and upon what demands the general medical conscience makes upon them. In plainer language, the progress of medicine rests largely on the use which men make of hospitals, since very little valuable

study of disease can be done in private practice. So true is this that, as every one knows, the history of Guy's, La Charité, Hôtel-Dieu, and other great hospitals, is the history of modern medical discovery.

The hospital surgeon has, in the first place, direct daily duties to his patients, but he has also a possibly higher duty for which he is presently responsible to the profession. And this duty arises out of the fact just stated,—that the clinical experience of private practice is usually valueless as a means of research. To the hospital physician and surgeon fall, therefore, certain chances of study which are not within the grasp of others; and so far as he fails to use them, does he also fall short of the unwritten duties of his post. No manager or fellow-doctor may call him to task; but, when years have gone by, and his miles of walks through his wards have brought no more than a mere selfish growth in personal experience, the profession at large may with reason urge that his stewardship of opportunities has been in fact a failure. We shall at once be asked by the anticipative reader what we mean, what kind of work we have in mind, how it is to be done; and perhaps, too, if he be critical and reads the journals, poor fellow, what kind of medical experience should not be given to their crowded pages. To us, answering, it seems that first of all, and easiest, we should be constantly getting from our staffs clear, well-studied, sharply-told experiences of their trials of novelties, whether they be of foreign growth, or among the host of new remedies, good or bad; but surely some most potent, which the so-called eclectic employs, and of which we know but little.

We might, for example, ask for a careful report, kept up for years, in brief tabular form, of all the cases in which anæsthetics are used in our hospitals; and not merely as to their fatal results, but of the relative frequency of those half-deaths and close rescues from danger which we have all seen, and shuddered to see. Next in ease of study come such as the thermal and other symptoms of diseases essentially of home-growth, like our malarial fevers, sunstroke, and our common summer-complaints.

Without entering into details, it were easy to call attention to many lines of clinical investigation which would be, to some extent, novel, either because they would deal with diseases which are more common here than in Europe, or because we should soon find that even well-known maladies not due to specific poisons put on, with us, peculiarities bearing some relations to our highly-marked seasons, and well worthy of study. Of course, such researches are difficult, and require trained clinicians; but

there are men enough among us who are competent, and who should be called upon to justify, by work of this nature, their right to the posts they hold. We have yet to learn that managers ever concerned themselves with this question; but they may feel quite sure that the men of this turn who find not one, but many, interests in their wards, are of all men the best, and the most likely to overlook no minor duties.

We are, of course, well aware that a few hospital physicians study their cases with care, and keep good notes; but, for various causes, the work so done comes to little, owing chiefly to a too great tendency to study each case in a disconnected way; or, haply, to a lack of training, or of interest, or of defined and accurate purpose. Abroad, we find hospital physicians carefully accumulating material year after year, bearing on some one disease, and at last drawing it anew with some novel light upon it, or refreshed, as it were, from the older pictures, by the aid of modern methods. Where now do we see such papers from our own great hospitals? And what is it that hospitals give us in the place of such work? Isolated cases,—Dr. A's case of this or that, reported by Dr. B; cases with or without post-mortem sections; cases which are either every-day commonplaces of diseases, or else are purely curiosities, but which, in any event, have no true value; cases which, grave or petty, should have been filed away until the commonplaces, by their number, would grow into value, or until the rarities, by like additions, should so multiply as to enable a shrewd observer to teach from them some useful lesson. But worse still are those wearisome reports of clinics, which, as a rule, are quite wanting in all of the higher qualities that justify, and but rarely justify, the publication of a class-teaching. Now and then we light on one of them which is an honest, thorough going-over of a subject with the last modern lights on it, and a certain freshness of treatment which makes the absence of novelty in facts or commentary endurable. Such lectures are at least what the lay-journalists call "good padding," and are, no doubt, heard with pleasure by students, and read—if read at all—without disgust. But, to say the best of them, as concerns the space they occupy in the journal, they are what Mr. S. Weller called "werry fillin' at the price."

There are other clinical reports which are of the lazy type. Dr. P reports the clinic of Prof. Q, the latter permitting or requesting the service. Then it is, indeed, that we get the worth of our time and money. A valuable ten lines on angina,—well enough if students alone were the looked-for read-

ers,—operation for hare-lip, etc., a case of Potts' disease, with no end of commonplaces or of statements which one reads more in sorrow than in anger, and which one would read more in mirth than in either were it not for the consequences of such teachings; or we have a case of hemiplegia, which proves to have been just the ordinary typical example; or, haply, Dr. Could reports Dr. Would: his case of local chorea,—which, as it sounds attractive, we read, to find at the end, like Sir Charles Coldstream, that "there is nothing in it." Now, all this sort of thing is well enough in a small Western town, which will have its medical journal; but it is provincial in tone, and is fatally indicative of a too eager desire to be advertised to the profession, and of a thorough lack of the mood of patient, watchful labor, which is only eager for truth, and which too much values its own time to waste that of another. The number of medical text-books produced by the profession may be pointed to as an evidence of useful activity in the medical mind of Philadelphia; but, valuable and necessary as these may be, to have much weight they must be the offspring of minds which have really added something to the science of the day; since, otherwise, they will be lacking in individuality, and will be simply and purely compilations more or less cleverly framed. In other and plainer terms, the prestige of a city which claims to be called, and which once was, a great medical centre, must always depend upon the amount of original work which it evolves; and it is just this which everywhere in America has been sadly wanting. In Boston there is almost none; in New York very little, despite immense clinical material; and with us, although more has been done than in either of the two places named, the amount and character of what we have to show in this direction are put to shame by many a little town in Europe.

We have pointed out that some of the blame of this state of things lies with the holders of hospital posts, with their lack of interest, of training, and of conscientious comprehension of their duties as hospital attendants. But a part of the trouble resides also in our absurd methods of hospital organization,—a subject with which we propose to deal at another time.

IT will be remembered that the Baltimore medical experts in the Wharton trials affirmed subsequently that they had been forced to do what they did by process of law; also that Mr. Thomas in his pamphlet stated that this was not true,—that their action was voluntary, beyond all law, that they were

practically the prosecutors, and that on this ground compensation had been refused them. As corroborative of this, we clip the following from the *Evening Bulletin* of this city,—issue January 24, 1874. We give it exactly as it appeared:

"FEE-BILLS OF THE 'FORCED' EXPERT-WITNESSES.—In the Baltimore City Council proceedings, at their last meeting, we find the following:

'Mr. Heusler presented the petition of Dr. S. C. Chew for pay for services in the case of Mrs. Wharton—attendance as medical expert twenty days, at \$20 a day, on first trial, and sixteen days at second trial, at \$20 a day; and for exhumation and examination of the body of General Ketchum, \$50. Also, the petition of Dr. P. C. Williams for pay for thirty-three days' attendance on first trial, at \$20 a day, and sixteen days at second trial at \$20 a day, and \$50 for exhuming and examining the body of General Ketchum. Also, petition of Dr. F. F. Miles, for pay for eight days' attendance at the second trial, at \$20 a day, and \$50 for going to Washington. The entire amount of Dr. Chew's bill is \$720, of Dr. Williams's \$1030, and of Dr. Miles's \$210. Referred to Committee on Claims.'"

REVIEWS AND BOOK NOTICES.

PARKES'S MANUAL OF PRACTICAL HYGIENE. Fourth Edition. Philadelphia, Lindsay & Blakiston, 1873.

This handsome octavo of six hundred and seventy pages is undoubtedly the most elaborate hygienic treatise in the English language. Full of facts and abounding in figures, sometimes even entering into abstruse calculations in mathematics and physics, its style is still uniformly clear and agreeable. Whatever labor its study presents belongs to the matter, not the manner, of its presentation. Yet we can hardly call it a well-arranged book. The classification of subjects is in itself a reasonable one; but in dealing with them the same topics come up again and again, with many iterations of the same statements. While this must add a few pages to the bulk of the volume, its excuse is, we suppose, that it may promote the familiarity of the student with important facts.

Dr. Parkes has evidently written his book with the interest of the soldier and that of the medical officer of the army always in view. The last one hundred and eighty pages (nearly one-third of the book) are occupied with the "service of the soldier" in its special sanitary relations at home and in foreign countries. A number of matters are also discussed in the other portions of the volume, in a manner not equally requisite for all readers. Still, the facts and laws of sanitary science are so general that the student of hygiene may find, with proper search for it, information upon nearly all the subjects belonging to a non-military work.

With the fourth edition before us, it is not needful to analyze all the contents of a book already so widely known. A few topics of importance may be referred to, with the purpose of bringing out Professor Parkes's "last word" upon them.

The learned author is by no means only an accumulator of other men's observations. He is an original and skilful experimenter of the first scientific rank; and also familiar, personally, with the experience of the physician. Yet novelty of opinion does not charac-

terize his book. Dr. Parkes inclines, it seems to us much more than is necessary, to respect, and even to yield to, the "current (especially British) opinion." On the whole, we have felt a certain degree of disappointment in concluding that we are to look to him, as a teacher, rather for the able presentation of those views upon sanitary subjects which prevail, than for the advancement of sanitary science on the basis of new facts and independent thought. From this it follows that, where doubt and controversy cloud a subject, this murkiness is somewhat reflected upon his pages; his candor and judgment forbidding the concealment of facts, even when their clear interpretation would annul the accepted professional dogma of the hour.

We find this approach to confusion upon several topics. One of these is that of the causation (as bearing upon the prevention) of typhoid fever. Following the lead of Canstatt and Budd, Dr. Parkes remarks, in one place, concerning the propagation of typhoid by impure water, "I think we may now safely believe that the presence of typhoid emanations in the water is necessary." On another page, nevertheless, we are told, "There are, however, some difficulties." These are the occurrence of typhoid fever, in well-marked instances, in the presence of sewer-air without any possible evidence of the vicinity of a person with the disease; and yet more, its breaking out in those who "have not been exposed apparently to sewer-air, or fecal emanations, or to the charge of any typhoid contagion." With seeming disinclination, he barely alludes to the possible supposition "of an origin apart altogether either from fecal emanations or a prior case of the disease." "Other modes of origin and transmission are not disproved." We like much better the *positive* statement of Dr. A. Flint:* "Although it may be undoubtedly communicated in some way from the sick to the well, under ordinary circumstances it is not diffused by contagion;" "facts appear to show conclusively the spontaneous generation of the causative agent in the great majority of cases."

Upon cholera, Professor Parkes's pages are saturated with the now current theory of the "portability" of the cause of the disease. Dr. Macnamara is cited as even fixing the period of danger in choleraic drinking-water. In that which has been contaminated by the discharges of cholera-patients, *vibrio*es appear with great rapidity; when this vibrional stage is replaced by the *ciliated infusoria*, the water (according to Macnamara) is no longer dangerous.

Facts contrary to this theory do not weigh much with Dr. Parkes; "the portability being certain." The idea of migration without human transportation is not entertained; notwithstanding the numerous facts (quoted in this work as well as elsewhere) showing the very frequent non-production of cholera by exposure to choleraic excrements; and, further, notwithstanding the fact that Pettenkofer could find no "evidence whatever" of this mode of transmission at Munich, nor Günther in Saxony, nor Volz and Witlacil in Baden or near Vienna; and that cholera moves across the sea, lighting in mid-ocean upon vessels which had left healthy ports; besides those obvious relations (proverbially present in India) of the disease to *season* and *locality*, which might not unreasonably have always forbidden the exclusive ascription of the extension of cholera to stercoraceous imbibition from becoming the "prevailing opinion."

Our author, when he extends the same or a similar theory to *yellow fever*, declaring (page 480) that "the discharges, especially from the stomach, probably spread the disease," certainly appears to us to run it into the ground. With that descent, however, the pro-

* Practice of Medicine, fourth edition, p. 883.

gress of this hypothesis is not quite ended; for the "grundwasser" of Pettenkofer, and the "intergrundwasser" of Virchow, next take it up. Reaching the surface, *current opinion* makes of it, in the air, *contagion*, in the form of excremental dust; while Hallier leads a few followers (especially *not* the botanists) to find in it swarming sporoids of the micrococcus of *urocystis oryzae*.

Especially noticeable it is, in view of the positiveness with which the above-mentioned theory is advocated by Dr. Parkes, how candidly and repeatedly he states the failure of those measures of prevention which it dictates. "The results of disinfection of the discharges have not hitherto been encouraging." "The evidence of the use of the plan in the last European epidemic is very disappointing." Yet every one knows that the effects of sound, thorough, general *sanitary improvements*, not tied to any theory, have in the last times of prevalence of cholera in many populous communities been most satisfactory in lessening much the mortality from the disease. Dr. Parkes's estimate of quarantine against cholera must be here added: "An island, or an inland village, far removed from commerce, and capable for a time of doing without it, may practise quarantine and preserve itself; but in other circumstances, both theory and actual experience show that quarantine fails."

The theory of *disease-germs* is treated by Professor Parkes with equal justice to all authentically-recorded facts and candid indecision in regard to conclusions. Lister, Beale, Hallier, Klebs, Tyndall, Burdon Sander-son, Bastian, Lex, Woodward, Wood, and Lewis are all cited. "That these creatures," he says, "are concerned in many diseases is clear." Yet "the present view is that while it has not been conclusively shown that bacteria or vibrios are in themselves hurtful (though they are held so by some observers), their presence indicates the co-existence of certain organic substances and putrefaction; and putrefactive substances in water are certainly dangerous." "Disinfection must rest at present on its own experimental evidence." Dr. Parkes affirms, upon his own observation, that while carbolic acid rapidly arrests the growth of fungi, it will not completely destroy them; "the carbolic acid withers without actually killing the fungi" (p. 131).

On the now much-debated question of *sewage-removal and utilization*, Dr. Parkes writes with excellent judgment, concluding that no one method as yet devised is equally applicable to all localities and circumstances. Water-sewerage, irrigation, precipitation, filtration, and the earth-system may all find their proper places, in different communities; while no final, perfect solution of the problem, at once sanitary and economical, has yet been attained.

One of the most instructive portions of this book is that upon the use of alcoholic beverages. Here Dr. Parkes has been an original observer, and has contributed facts of cardinal importance. Yet his deductions are restrained from advancing so much as (it appears to us) those facts would warrant beyond the views commonly accepted, now, it is true, with diminishing confidence, in Great Britain. He scarcely contravenes, as we believe he might have done with great advantage, Dr. Anstie's opinion, that one ounce of alcohol daily is a wholesome, if not required, portion for an average adult man in health.

But we must with reluctance cut short, for want of space, our imperfect account of this very valuable treatise. We may conclude with some of Dr. Parkes's own words: "Were the laws of health and of physiology better understood, how great would be the effect! Let us hope that matters of such great moment may not always be considered of less importance than the languages of extinct nations, or the unimportant facts of a dead history."

H. H.

ON THE STRUCTURE OF CANCEROUS TUMORS, AND THE MODE IN WHICH ADJACENT PARTS ARE INVADDED. The first of the Toner Lectures, instituted to encourage the Discovery of New Truths for the Advancement of Medicine. Delivered by J. J. WOODWARD, Assistant-Surgeon U.S.A.

Just now it is *the mode* with some Continental pathologists to attribute many of the ills that flesh is heir to to the baneful influences of the migratory white blood-corpuscle. With these theorists it no longer suffices that the innocent function of supplying red disks be ascribed to the white corpuscles, but they must needs make them serve, when escaped from the blood-vessels and becoming migratory or wandering-cells, as the fertile sources of pus-corpuscles, epithelial cells, etc. Ay, they have even so far distorted these delicate lumps of protoplasm as to fabricate them into the huge monsters of the so-called cancer-cells.

It is needless to state that the prevalence of this hobby of Cohnheimism has extended to Washington, where, to say the least, it seems to have proved thoroughly infectious. Virchow, with his famous doctrine of *omnes cellula e cellula*, is thrown overboard, it being antiquated to imagine any longer that cancer originates by the multiplication of the connective-tissue corpuscles. Thiersch's and Waldeyer's theories of the genesis of cancer-cells by a proliferation from the softer epithelial layers of the rete Malpighi and of the glandular appendages of the skin or mucous membranes, are not adopted by the lecturer. The view of Koester, that cancers of the skin originate in and from the lymphatic spaces and vessels, is only accepted in so far that the brood of small cell-infiltrations, usually observed in the stroma of the marginal portions of cancerous tumors, is placed within the lymph-spaces. These small cells, eventually transformed into the larger epithelial-like cells, are not derived from the endothelium of the lymphatics, as Koester would lead us to suppose, but from the white corpuscles escaped from the blood-vessels.

The swarm of small cells about the terminal buds of the cancer-cylinders, which Dr. Woodward regards as migratory corpuscles accumulated within the lymph-spaces, as well as the presence of "numerous unmistakable wandering corpuscles among the epithelial cells seen in almost all sections of epithelial cancer," have led him to consider the wandering-cell as the most probable source of cancer. These wandering-cells are next made to increase in size and number, at the expense of the surrounding adipose tissue, until they attain the lordly proportions of the epithelial-like cells.

No doubt this new theory of the genesis of cancer was rendered extremely plausible to the lecturer's audience by the exhibition of his clever photo-micrographs; but to us, unfortunately, the printed evidence does not appear quite so conclusive. In fact, we doubt very much, unless more ample proof be furnished, whether much credence will be given to this view of the origin of cancer.

There is no knowing what wondrous things these followers of Cohnheim might yet have led us to accept as growing out of the wandering-cells: if cancer, then why not also round-celled sarcoma, myxoma, glioma, and so on? Fortunately, this uncontrolled enthusiasm concerning the migratory white blood-corpuscle and its functions received an effectual quietus by the experiments of W. F. Norris and Stricker; who showed conclusively that even the fixed stellate connective-tissue corpuscles, when irritated and inflamed, are capable of undergoing a variety of changes both in form and position,—in other words, capable of becoming wandering-cells.

Agreeing with the lecturer that the doctrine of a cancerous dyscrasia of the humoral pathologists is no

longer tenable, we must confess our inability to understand clearly how this theory of his is not virtually a migratory step back to these exploded doctrines. The reader will find this brochure a very excellent summary of the various views entertained by the pathologists of the present time. Its perusal will familiarize him with many authorities as yet inaccessible to the English reader.

R. M. B.

GLEANINGS FROM OUR EXCHANGES.

A RARE PHYSIOLOGICAL EXPERIMENT (*British Medical Journal*, December 20, 1873).—Dr. Brandt, Professor of Surgery in Klausenburg, has placed on record, in the *Wiener Medicinische Wochenschrift*, a case in which removal of the sound kidney took place in the human subject. A healthy man, æt. 25, was stabbed with a bread-knife in the left hypochondrium. Hemorrhage to the amount of three or four ounces followed; and, about three hours after the accident, a fleshy-looking tumor was expelled through the wound by a fit of coughing attended with severe pain. It was replaced by a by-stander, but was soon again driven out by the cough. On his admission into hospital, twenty-four hours after the injury, Dr. Brandt, after a careful examination of the protrusion (of which a careful description is given), arrived at the conclusion that it was the left kidney. Its surface, with the ureter, was torn in some parts, and allowed the escape of a fluid, at first yellowish and transparent, but afterwards sometimes reddish and sometimes turbid yellow. It had an alkaline reaction, a specific gravity of 1.042 to 1.052, contained a large quantity of albumen and mucin, with some hæmoglobin, traces of urea, and an abundance of alkalies and alkaline earths. It gave a sediment, which on microscopic examination was found to consist of pus and blood-corpuscles, masses of nuclei, mucus-fibrils, and fibrinous clots; also epithelium of the kind belonging to the calyces and pelvis of the kidneys. Dr. Brandt arrived at the conclusion that the organ was rendered useless, that its retention endangered life, and that it would be best to remove it. The previous history of the patient did not contra-indicate this: he had had no severe illness, and, though the urine in the bladder contained some albumen, this might be derived from the injured organ. Accordingly, on the fourth day of the injury,—photograph of the patient having been first taken,—Dr. Brandt tied the pedicle of the tumor in two parts, by means of a ligature passed through the middle, and cut it away with a knife. This operation was done on June 7, and on the 23d the patient left the hospital convalescent. No symptoms of uræmia or of peritonitis occurred during the progress of the case. The amount of urine excreted was measured daily up to the 22d. The quantities were the following: June 7th (half-day), 310 grammes; 8th (whole day), 923 grammes; 9th, 905; 10th, 1425; 11th, 1211; 12th, 992; 13th, 1278; 14th, 1222; 15th, 1348; 16th, 1306; 17th, 1296; 18th, 1324; 19th, 1312; 20th, 1437; 21st, 1498; 22d, 1513 grammes. The urine was throughout acid, of specific gravity 1.010 to 1.040, and of normal composition: at first it was of a reddish-yellow color, but afterwards became clear yellow. Dr. Brandt has seen the man several times since the operation. He has no signs of disease of the heart, but complains of a sense of oppression and fatigue, especially in going upstairs, and says that he cannot work as well as before. Dr. Brandt, however, suspects that he may say this to avoid military service.

SLEEPLESSNESS (*The British Medical Journal*, December 27, 1873).—Dr. Dyce Duckworth directs atten-

tion to some causes of insomnia, which, he thinks, are hardly sufficiently recognized or adequately met by the resources of practical medicine. Recent researches have clearly shown that the brain is comparatively anæmic during sleep, and that the blood thus removed from the head is more freely supplied to the viscera and integuments.

The most constant cause, and certainly the most frequent accompaniment, of sleeplessness, is an opposite condition, or one of active and increased cerebral circulation. A species of nocturnal dyspepsia, mild in its character, and producing no actual suffering, may sometimes give rise to persistent insomnia. There may be no symptoms beyond dryness of the mouth, burning of the soles of the feet, and heat and throbbing in the head, and these are probably due to a too acid condition of the contents of the stomach and upper part of the small intestines, caused generally by excess in fatty and highly-seasoned food, in fruit, and in various wines.

Sleeplessness may be due to bodily and mental over-exhaustion, which results in an increased flow of blood to the brain, consequent upon vaso-motor paresis. Again, it may be the result of mere habit, as in those cases where there has been a long course of broken rest; it may be caused by persistent odors, by certain effluvia, by the absence of moisture in the air of the sleeping-apartment, or by an improper elevation or depression of the head.

The treatment in most of these cases should of course be directed to the removal of the cause; but, when it is found necessary to give drugs, bromide of potassium and chloral hydrate are probably the best, both having been shown to diminish the amount of blood circulating through the brain.

RETENTION OF URINE CAUSED BY A FIBROID GROWTH (*The Lancet*, December 27, 1873).—Mr. Henry Smith reports the case of a child, nineteen months old, who, when first seen, was suffering from retention of urine, having passed no water for two days. A very tight phimosis which existed was relieved by division of the prepuce, but repeated attempts at catheterization, both with and without chloroform, resulted only in failure. The rectum appeared preternaturally dilated, and there was a perceptible hardness between it and the bladder. This was thought to be possibly due to blood effused from previous attempts at catheterism or to a calculus lodged in the neck of the bladder. The urine was withdrawn by means of an aspirator, and the operation was twice afterwards performed, but the child gradually sank, and died at the end of four days. At the post-mortem examination a large, irregular fibrous growth was found interposed between the rectum and the bladder, springing apparently from the periosteum of the pubes and ischium, extending under the arch of the former backwards and forwards, and thrusting the urethra out of its course against the left ischium. The microscopic appearances were those of a fibroid or recurrent growth.

FORMULA FOR UNGUENTUM ALTHÆÆ, OR MARSH-MALLOW OINTMENT.—R Lard, 1 pound; curcuma, 2 drachms; water, 4 drachms; yellow wax, burgundy pitch, of each, 6 drachms. Boil the lard, curcuma, and water together, until all the moisture has disappeared; then add the wax and pitch, strain while hot, and stir while cooling.—*Prussian Pharmacopœia*.

REMEDY FOR CHRONIC HOARSENESS.—In chronic hoarseness arising from thickening of the vocal cords and adjacent membrane, the ammoniated tincture of guaiacum is often a very efficacious remedy. It may be appropriately mixed with equal parts of the syrup of senega, and a teaspoonful of the mixture given two or three times a day.—*American Practitioner*.

ETIOLOGY OF PULMONARY PHTHISIS.—In *Archiv für Experim. Path.*, Heft 3, 1873, Dr. Sommerbrodt has published an article, in which he relates the results of various experiments which he had conducted with the object of showing the connection which exists between pulmonary phthisis and certain primary affections of the larynx. The following conclusions are drawn from his experiments:

1. Chronic inflammation of the larynx and the upper part of the trachea in rabbits constantly induces pulmonary disease.

2. This disease is totally different from those which manifest themselves usually in rabbits, or which are produced experimentally, and consists in purulent peri-bronchitis, which, as is well known, ultimately brings on destruction of the lung, or pulmonary phthisis.

3. Consequently, purulent peri-bronchitis is an intermediate condition between primary ulcers of the larynx and pulmonary phthisis, and this is equally applicable to man.—*London Lancet*.

POISONING BY NITRATE OF SILVER.—As there are but two or three fatal cases of poisoning by nitrate of silver on record, we extract the following from the *Public Record*, of Philadelphia, for December 3: "Dr. Edward Petzold, of New York, lately applied a piece of nitrate of silver, better known as lunar caustic, at the end of a quill, to the throat of Charles Sternall, a child, in a case of inflammation. The nitrate of silver slipped from the quill down the child's windpipe, and entered the stomach. Its fearful effects were immediately apparent. The child was in agony, and died after the coatings of the stomach had been completely burned away."

THE EFFICIENCY OF ENEMATA.—Gustav Simon has succeeded in demonstrating that a stream of water forced into the rectum by means of a syringe may be made to penetrate the entire length of the large intestine, and possibly extend also into the small intestine. His experiments were performed upon two separate patients, each of whom happened to have a fistulous opening in the ascending colon, near its junction with the cæcum.—*Archiv für Klinische Chirurgie*; from *Boston Medical and Surgical Journal*.

CASE OF NEURALGIA OF THE TESTES CURED BY ELECTRICITY.—A young man free from all syphilitic disease experienced such intense pain in the testes that he urgently asked Dr. Felippi to perform castration. The case was carefully made out to be neuralgia, independent of any affection of the testicle or of any accumulation of fecal matter, and in five sittings the patient was entirely cured. Dr. Felippi made use of a weak and direct constant current.—*L'Imparziale*, No. 16, 1873.

ONYCHIA MALIGNA.—Rest and attention to the state of general health having preceded, the fungous growth is then burnt with strong nitric acid, washed with water, and poulticed. The relief is certain, and the repetition of the application seldom necessary. If there should be any trouble with the nail, the tender flesh may be protected by the insertion of a thin piece of compressed sponge, kept in its place by strips of plaster applied longitudinally to avoid compression.—*British Medical Journal*.

CHRONIC CATARRH OF THE PHARYNX TREATED BY GALVANO-CAUSTICS.—In an article published in *Deutsche Zeitschrift für Chirurgie*, Dr. Carl Michel, of Cologne, advocates the use of galvano-caustics in chronic catarrh of the pharynx. He mentions seventy cases in which he was entirely successful, and in many of which inhalations, cauterizations with nitrate of silver, employment of mineral waters, etc., had failed.

MISCELLANY.

ENORMOUS CUTTLE-FISH OFF NEWFOUNDLAND.—So much interest, popular and scientific, attaches to the subject of cuttle-fishes that we offer no apology for extracting the following from the *New York Tribune*: "It appears, from a letter written by the Rev. Mr. Harvey, of St. John's, Newfoundland, to Mr. Dawson, Principal of McGill College, Montreal, that on the 26th of October two fishermen who were out in a small boat observed some object floating on the water at a short distance, which they supposed to be a large sail or the débris of a wreck. On reaching it, one of the men struck it with his 'gaff,' when immediately it showed signs of life, and reared a parrot-like beak, which they said was as big as a six-gallon keg, with which it struck the bottom of the boat violently. It then shot out from about its head two huge, livid arms, and began to twine them round the boat. One of the men seized a small axe and cut off both arms as they lay over the gunwale, whereupon the fish backed off to a considerable distance and ejected an immense quantity of inky fluid, that darkened the water for a great distance around."

"The men saw it for a short time afterwards, and observed its tail in the air, which they thought to be ten feet across. They estimate the body to have been sixty feet in length and five feet in diameter, of the same shape and color as the common squid, and moving in the same way as the squid, both backward and forward. One of the arms which the men brought ashore was, unfortunately, destroyed; but a clergyman who saw it assured Mr. Harvey that it was ten inches in diameter and six feet in length. The other arm had six feet of its length cut off before leaving St. John's; the remainder, which measured nineteen feet in length, is but three inches in circumference, except at the extremity, where it broadens like an oar to six inches in circumference."

"The men estimated that they left about ten feet of the arm attached to the body of the fish, which would make it about thirty-five feet long. A trustworthy witness informed Mr. Harvey that in the winter of 1870 the bodies of two cuttle-fishes were cast ashore on the coast of Newfoundland, measuring forty and forty-five feet respectively."

SLIPPERY-ELM BARK AS A POISON.—A son, aged 15 years, of Samuel Winslow, near Brooklyn, Iowa, ate a quantity of slippery-elm bark. A day or two afterwards he was taken violently ill, and, four days from the time of eating the bark, died. On a post-mortem examination, his stomach was found full of the bark twisted into balls, the organs being too weak to digest it.—*Druggist's Circular*.

It is stated that Professor Owen has just discovered in the London clay, at Sheppey, a new fossil bird with teeth somewhat resembling those in the Australian hooded lizard. He concludes it to have been web-footed and a fish-eater. No evidence of true teeth had previously been known in any bird.

CHOLERA IN HUNGARY.—The *Lancet* states that the epidemic of cholera in Hungary, from its beginning in 1872 to its close in 1873, is said to have attacked not less than 433,000 persons, and of these killed upwards of 183,000.

DR. HENRY W. FULLER, well known for his papers on rheumatism, recently died in London, at the age of fifty-three.

NOTES AND QUERIES.

TO THE EDITOR OF THE PHILADELPHIA MEDICAL TIMES:

It is with an internal sense of pleasure and warm approval that I have read your vigorous onslaught against the favoritism and privileges which medical men of high professional status assume and appropriate to themselves with so much *sang-froid*.

The poor, struggling devils at the bottom of the tree are compelled to observe every nicety and shade of ethical and traditional law of medical manner and custom; and it is with thanks, warm and hearty, that *one of them* sends greeting to you for your efforts to make *all* observe alike, whether at the top or the bottom round of the ladder.

It would profit nothing to expose the dirty tricks and traps by which doctors endeavor to destroy one another, and especially their struggling brethren. The astounded public would only hold us all in greater contempt, and cause new and more ingenious means to be invented to haze the younger or less successful members. But there is one great, growing evil, that is destined to crush not only the struggling practitioner, but to embarrass the whole profession, and that is the multiplication of so many hospitals and dispensaries in which medical services and advice are freely given away.

Those at the top of the tree may care very little about this matter; nay, may, and *do*, encourage the formation of these institutions for all manner of general and special purposes, well knowing that the class of patients who frequent these places do not intrude into their consulting-rooms; whilst the poor struggler looks on with the pain of hope deferred at the long lines and swarms of patients,—a motley crowd, it is true, of

"Mongrel, pup, whelp, and hound,
And curs of low degree,"

even from which *he* is debarred "in order that the institution may be extended in usefulness."

Why is it, even in these hard times, when it has become necessary for the charitable to form associations for the relief of the distressed, and the distribution of fuel and food and clothing, that they have a natural desire to know whether the recipient is really deserving or not? Does not every poor body who deserves help have to get some one who is well known to endorse them before *he* or she can be supplied? Why? because fuel, food, and clothing have fixed and certain values, and are valued accordingly. Is medical advice of any value? One would not think so, to judge from the eagerness with which medical nincompoops struggle and lay pipe to secure appointments on the staff of dispensaries and every public place where they can bestow their advice to any one willing to receive it, without question, money, or price. Is *vox Populi vox Dei*? Then the people have only to take their cue from the doctors themselves, and place the proper value on the article so freely given away. If the doctors think their advice and services worth nothing, why should the people think otherwise? What follows? Is it any wonder the dear public regard the advice of quacks, from a piss-doctor* to a homœopath, as equal to that of the best educated and most scientific practitioner of our art? The people see that with every other trade and profession certain prices are asked and paid without question; but they notice a body of men with high-sounding titles anxious to give away *in public* the article they have to sell, yet asking a good round sum if it is desired *in private*; and they reasonably demur, *if the privacy is all that is to be paid for*.

It is said the poor have the gospel preached to them without money and without price! Is it true? Look critically at any of our large congregations, and count how many really poor there are present; and if present in any large numbers, will it not turn out upon investigation that the said poor mostly pay the pastor? It may be said, Ah, but there are the missions and the street-preaching, which are free to all. Is it really so? *Does not the preacher get paid by somebody?* If so, then it is not free in the sense in which medical services are, where *nobody* gets paid.

*Some years ago, a lot of scallawags went around the country pretending they could tell and cure any disease by simply *looking* at the urine of the patient; they were dubbed piss-doctors by the populace.

And of the law! if there were established all over the city inns of court, where a body of lawyers was assembled at certain hours every day to give out free opinions, how would it fare with that profession? Why, just as it now does with the medical; all respect for the opinion of a lawyer would cease, and chimney-corner lawyers would abound, just as quacks now do in medicine. The lawyers, like the members of every other trade and profession, are sharp enough to appreciate this, and make their opinion as comprehensive and valuable as that of Jack Bunsby; a sharp fee and cash on delivery are the watchwords, and hence no ancient crone or Washington's body-servant can upset *their ipse dixit*. But, in the medical world, how very easily are *our* opinions knocked into the mud! Only to-day, after a consultation with "a head-doctor" of a hospital, over a case of simple inflammatory rheumatism in which nearly all the prominent symptoms were so well marked that even a medical tyro could not err in the diagnosis, and after a full explanation of the case to the friends of the patient by both doctors, I was gravely informed by the mother of the lad that a neighbor had pronounced it to be a case of *relapsing fever*! and she feared the doctors did not understand the case. Shade of Hippocrates and Professor Paine! Is not this the experience of every medical man? and does it not tally with the value we set on our own opinions and services by making them so free to all? One can hardly look at a newspaper without having his attention called to some new institution for special or general purposes being established by Doctors Smith, Jones & Co. Poor fellows! *they* are not on any of the numerous staffs, and they will have a staff of their own if nothing better can be had.

And what is to prevent any or all of the smaller fry from following the example of the Pennsylvania Hospital, in advertising the names, offices, and residences of those Jeremy Diddlers? If these hospital doctors can have their names and residences emblazoned in the public print, no matter whether by their own doing or that of the hospital managers, why cannot the vulgar herd announce in print, in the biggest type, *their* ability to cure piles, retroflected uterus, and all the ills that flesh is heir to? Why should not *we* go about with our obstetrical forceps stuck in our coat-pockets, taking care that the long handles thereof be left prominently out, and strike with awe the common multitude? What is to hinder these said managers of the hospitals and dispensaries from insisting on their SERVANTS wearing a suit of livery à la Jeems Yellowplush? I cannot help wishing they would do so, and thus run the thing into the ground.

How is all this to be remedied? I answer, simply by the reasonable process adopted by all our charitable associations for the relief of the suffering poor, viz.: that we *demand* the same evidences of the worthiness and real poverty of the applicants before advice or services are rendered. If this simple remedy were adopted, there would be far less *material* for hospitals and dispensaries to help up at a rapid pace the medical exquisites of high social-status parentage; give a *fixed* and *certain* value to medical opinions, and place us all on a fair equality for the race which is before us.

VERTEX.

PHILADELPHIA COUNTY MEDICAL SOCIETY.

At the stated meeting in January, the following officers and delegates were elected for the year 1874:

President—Dr. W. L. Atlee.

Vice-Presidents—Dr. Albert Fricke and Dr. J. E. Eshleman.

Recording Secretary—Dr. Henry Leaman.

Assistant Recording Secretary—Dr. Lemuel J. Deal.

Corresponding Secretary—Dr. William Goodell.

Treasurer—Dr. William M. Welch.

Censor—Dr. H. St. Clair Ash.

OFFICIAL LIST

OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U.S. ARMY, FROM JANUARY 27, 1874, TO FEBRUARY 2, 1874, INCLUSIVE.

BAILY, JOHN C., SURGEON.—Granted leave of absence for two months. S. O. 15, A. G. O., January 26, 1874.

BENTLEY, E., ASSISTANT-SURGEON.—Granted leave of absence for thirty days, with permission to apply for an extension of thirty days to the Adjutant-General of the Army. S. O. 11, Department of California, January 21, 1874.

TAYLOR, M. K., ASSISTANT-SURGEON.—Paragraph 1, S. O. 8, c. s., from these Headquarters, is revoked, and Assistant-Surgeon Taylor is assigned to duty at Austin, Texas. S. O. No. 11, Department of Texas, January 19, 1874.

HEIZMANN, C. L., ASSISTANT-SURGEON.—Assigned to duty as Post Surgeon at McPherson Barracks, Nebraska. S. O. 10, Department of the Platte, January 23, 1874.

SATURDAY, FEBRUARY 14, 1874.

ORIGINAL COMMUNICATIONS.

A NEW THEORY CONCERNING THE PROXIMATE CAUSE OF THE ENLARGEMENT OF THE PROSTATE BODY [GLAND].

BY JOHN STOCKTON-HOUGH, M.D.,

Philadelphia.

SIR HENRY THOMPSON* says, "Next in importance to the discovery of some unquestionably successful means for the cure of enlarged prostate, perhaps, indeed, equal to it, would be a recognition of those circumstances which stand in the relation of cause, remote and proximate, to this remarkable affection."

With a view of determining the proximate cause, the writer has incidentally collected a few facts which seem to explain in some cases the cause of the enlargement of the prostate, and begs to offer them to corroborate the opinion advanced which attributes the condition to developmental causes.

Albinus,† and Cowper‡ as well, described a small sac in the region of the caput gallinaginis in the male urethra, which was afterwards described by Morgagni,§ and called the sinus pocularis, which Weber|| called the *uterus masculinus*, and Huschke¶ *utriculus prostatica* or *virilis*, and which is believed by the majority of celebrated anatomists of the present day to be the analogue of the genital canals (uterus and vagina) of the female. Among these may be mentioned Ackermann, Schlichting, and Guthrie.

The male uterus (prostatic vesicle), according to Simpson, is "often prematurely enlarged and disproportionately developed in different kinds of hypospadiac and hermaphroditic malformations."**

The acquired enlargement of the prostate is principally found in quite old men, at the close of their sexual life, and has been often observed in animals whose testicles have been injured or extirpated.

According to Greve,†† "the prostate gland as well as the vesiculæ seminales become augmented as much as a third in their volume in consequence of the operation" of castration in the horse.

Hunter proved from his experiments that the vesiculæ seminales of the side on which he extirpated the testicle do not undergo diminution in size. The enlargement of the vesiculæ seminales in cases of the removal of the testicles would seem to give weight to M. Geoffroy St.-Hilaire's observation,—viz., that the vesiculæ seminales are the analogue of the body of the uterus in the female.

Simpson‡‡ suggests that "some of the various diseased states attributed to enlargement, etc., of the third lobe of the prostate gland will yet be found to be morbid states of the prostate vesicle. To the minds of some, the investigations of 'the diseases of the male uterus' would appear to be almost a paradox in thought and words."

Simpson evidently looks upon this enlargement as a morbid or diseased state, which is certainly developmental in its character, if a disease at all. The writer claims, however, that simple enlargement of the prostate often occurs without being in any wise a diseased or morbid state, any more than the growth of beard or non-development of the mammary glands in the female, or the absence of beard or development of these glands in the male, are diseased conditions.

In women who have passed the climacteric period the uterus often becomes diseased, but as often becomes atrophied by virtue of the cessation of the functional activity of the ovaries, following some physiological law of development. Velpeau says, "In old age the ovaries are atrophied, become *elongated*, and of a very irregular shape; the womb tends again back to the original size; the cavity of its body becomes so contracted that the stricture which connects it with the neck is sometimes found to close it completely up, as has been very judiciously observed by M. Mayer, and as I have often observed."

My friend and sometime colleague, Dr. A. C. W. Beecher, in a recent letter called my attention to the case of a lady who died at the age of eighty-nine years from cancer of the pylorus, in whom the uterus showed marked diminution in size, it being but two inches in length, one and a half inches in breadth at the largest part of the body, and one-half inch thick at this part. The body of the organ was flaccid, wrinkled, and very inelastic, and felt as if the vessels had undergone some degree of ossification, as had other arteries in the body. The intra-vaginal portion of the cervix was entirely obliterated. An incision through the anterior wall showed the arbor vitæ very distinctly. The os internum was tightly closed, and the cavity of the uterus contained a small quantity of jelly-like matter. The body was smaller proportionally than the cervix, comparing it with the menstruating womb. The ovaries were shrivelled, being almost as hard as cartilage, and had numerous small cysts over their surfaces. The uterus, ovaries, and appendages did not weigh one-third as much as the ordinary healthy organs of a menstruating woman. This woman had borne several children. The date of the cessation of the menses is not known.

The release of the domination of the testicles in males, either by castration, disease, or obliteration, we know allows of reversion towards the female type in secondary sexual characters; and why may not this be accompanied by a corresponding development of the morphological analogue of the female uterus and other undeveloped female organs

* On Enlarged Prostate, London, 1868.

† Annotat. Acad., iv, tab. iii, fig. 3.

‡ Glandularum nuper Detect., descrip. 1 and 3.

§ Adversaria Anatomica, iv., 1723, p. 6, tab., figs. 1 and 2.

|| Ernest-Henri Weber, Prof. d'Anat. et de Physiol. à Leipsic. Mémoire sur un Vestige d'Uterus chez les Mâles des Mammifères, sur la Structure de la Prostate, etc., etc. Découverte d'un Rudiment d'Uterus (Uterus masculinus) chez l'Homme et chez les Mâles des Mammifères: Review by Dr. Courty, Archiv. Gén. de Méd., Suppl., 1846, p. 379.

¶ Encyclopæd. Anat., Splanchnologie, p. 74.

** Obstetrical and Gynaecological Works, vol. ii, p. 319.

†† Bruchstücke zur vergl. Anat. und Physiol., p. 45.

‡‡ Simpson, Obstetrical and Gynaecological Works, vol. ii, p. 318.

in the male, by mere exhaustion of their procreative powers by age? May not, then, the enlarged prostate of the aged, or indeed at any time of life, be considered as an attempt to develop a uterus, rather than an actual diseased condition and as indicating a loss of sexual capacity?

The enlargement of this organ under these circumstances might be ascribed to *retrogressional development*, if we may use such an expression.

Sir Astley Cooper* says, "The enlarged prostate is the consequence of age, and not disease."

Sir Charles Bell† gives no opinion as to the remote predisposing cause.

Sir Henry Thompson is of the opinion that the nature of the enlargement is not a morbid one, but usually a hypertrophy of the normal tissue of the organ. Mr. Ellis appears to be of the same opinion.

Though there can be but little doubt that this organ is sometimes the seat of morbid action, yet "malignant disease of the prostate is undoubtedly a rare affection."‡

Professor Gross, so ripe in experience as a teacher and practitioner of surgery, and consequently so well qualified to judge of the nature of the affections of this organ, says, in speaking of enlargement of the prostate, "The complaint seems to depend essentially upon hyperplasia of the unstriped muscular and fibrous elements which constitute the chief bulk of the prostate, and which, during the progress of age, are liable to new growth similar to that so often witnessed in the uterus of elderly females. . . . Hence hypertrophy of the prostate cannot be regarded as an adenoma, in the true sense of the term."§

Dr. John Ashhurst, Jr.,|| also calls attention to the analogy between the "fibrous and fibro-muscular growths (myomata) met with in the uterus" with those found in the prostate body.

Concerning the impropriety of considering the prostate as a glandular body, recent anatomists and surgeons of the highest authority are agreed that the prostate is not a gland, but a muscular organ; and the writer would suggest the name of *prostate body* as a suitable name for this organ.

Mr. George Viner Ellis¶ says that "The prostate is a muscular body, consisting of circular or orbicular involuntary fibres." He therefore considers that "the propriety of calling that body a gland is rendered doubtful."

Sir Henry Thompson, in speaking of the enlargement or tumors of the prostate, says, "In all, however, the basis is *muscular fibre*." Concerning the analogy between the prostate and the uterus, he says, "Analogies of a remarkable kind exist between the characters and relations of these three forms of tumor and those which affect the uterus."***

Velpeau†† also insists upon this analogy; and indeed it is, we are persuaded, the almost universal opinion of surgeons and anatomists of the highest authority of the present day.

Sir Henry Thompson, in his "Jacksonian Prize Essay" on stricture of the urethra (1852), stated it as his "belief that its [the prostate's] function was that of a *muscle*, and that it performed an important part in the apparatus designed to expel the seminal fluids." Mr. George V. Ellis‡‡ is of the same opinion.

In another place,§§ though he regards the cause of enlargement as by no means determined, yet he says, "It is an interesting circumstance that the prostate (male homologue of the uterus) should exhibit analogies in many points of view with the latter organ in regard to its tendency to overgrowth. The most obvious explanation, and the conclusion which, after a careful examination of the subject, is that which appears to me better supported than any other, seems to be offered in the simple fact, now completely established, that the structure in both [prostate and uterus] is exceedingly prone to develop among its component elements minute, independent, isolated formations, possessing an organization identical with itself," etc., etc.

Civiale|||| declines to accept the speculative analogy between the prostate and the uterus, and, indeed, combats, in an equally futile way, most of the causes hitherto assigned, except, perhaps, calculus of the bladder.

Some authors look upon the enlargement of the prostate as a mere accidental circumstance, as the appearance of cancer for instance; while others go so far as to regard it as an almost invariable concomitant of old age.

Sir Benjamin Brodie says, "When the hair becomes gray and scanty, when specks of earthy matter begin to be deposited in the tunics of the arteries, when a white zone is formed at the margin of the cornea,—at this same period the prostate gland usually, I might perhaps say invariably, becomes increased in size."¶¶

Sir Everard Home*** also regarded the enlargement of the prostate as a natural attendant of old age.

The latest and most distinguished of these knighted††† celebrities in the treatment of this condition—Sir Henry Thompson—considers that "It may be regarded as established by the facts before the Society, that enlargement of the prostate, so far from being a change natural to old age, is an exceptional condition."††† This opinion is principally based upon 43 specimens of the prostate from

†† Dictionnaire, en 30 vols., t. xxvi. p. 175.

‡‡ Med.-Chir. Trans., *loc. cit.*

§§ On the Enlarged Prostate, etc., London, 8vo, 1868, p. 63.

¶¶ Traité pratique sur les Maladies des Organes génito-urinaires, vingt-troisième partie, Paris, 1830, pp. 363-381.

¶¶ Lectures on the Urinary Organs, fourth edition, p. 162.

*** Practical Observations on the Treatment of the Diseases of the Prostate Gland, 2 vols., London, 1838.

††† It is noticeable as a curious coincidence that most of the knighted surgeons have given us essays, articles, or monographs on this condition: witness Sir Astley Cooper, Sir Everard Home, Sir Charles Bell, Sir Benjamin Brodie, Sir James Fergusson, Sir James Paget, Sir Henry Thompson, Sir James Y. Simpson; and in our country, though we have no knights in orders, yet of knights indeed, Gross, Pancoast, Mott, and Buck are equally worthy.

††† Medico-Chirurgical Transactions, vol. xl., 1857, pp. 76-105.

* Lectures, in the Lancet, vol. iii., 1824, p. 239.

† Med.-Chir. Trans., vol. iii., 1812, pp. 171-189.

‡ Sir Henry Thompson, *op. cit.*, p. 212.

§ Professor Samuel D. Gross, M.D., LL.D., D.C.L. Oxon., "A System of Surgery," etc., eighth edition, Philadelphia, H. C. Lea, 1872, in 2 vols. 8vo; vol. ii. p. 832. See also his work on "Diseases of the Urinary Organs," Philadelphia, 1856.

|| John Ashhurst, Jr., M.D., "Principles and Practice of Surgery," Philadelphia, H. C. Lea, 1871, 8vo, p. 881.

¶ Medico-Chirurg. Transactions, vol. xxxix., 1856, p. 330. "An Account of the Arrangement of the Muscular Substance in the Urinary and Certain of the Generative Organs of the Human Body."

** *Op. cit.*, p. 90.

men 50 years of age and above, examined by this distinguished author. Of these 43 specimens, two were unusually small, 14 were enlarged, or 32 per cent. The average age in the nine cases in which the enlargement was slight was 64 years. In the five cases where the enlargement was notable the average age was 69 years, none being younger than 61. The average age of persons of 50 years and upwards not affected by enlargement was 64 years.

Dr. John Cockburn Messer, in his "Report of the Condition of the Prostate in Old Age, founded on the Dissection of 100 Specimens in Individuals over Sixty Years of Age,"* says that 35 per cent. of them were enlarged, 20 per cent. abnormally small, and 45 within the limits of normal weight. Where the gland was normal, of those above sixty years of age the average age was 76.2 years; where it was enlarged, 75.2.

He concludes that "This enlargement, which is found in 35 per cent. of all prostates after sixty years of age, is produced principally by hypertrophy of the fibrous tissue which naturally exists in the organ."

Dr. John W. Lodge, at the suggestion of Professor Gross,† examined 312 cases, with the following results:

Of 23 men aged from 40 to 50 years, 2, or 8.69 per cent., had hypertrophy of the prostate; of 94 men aged from 50 to 60 years, 18, or 19.14 per cent., had hypertrophy, and 3 atrophy, of the prostate; of 113 men aged from 60 to 70 years, 27, or 23.89 per cent., had hypertrophy, and 2 atrophy, of the prostate; of 64 men aged from 70 to 80 years, 11, or 17.18 per cent., had hypertrophy of the prostate; of 15 men aged from 80 to 90 years, 3, or 20 per cent., had hypertrophy of the prostate; of 3 men aged from 90 to 100 years, none had hypertrophy or atrophy of the prostate. Thus, in 289 men aged from 50 to 100 years, 59, or 20.45 per cent., had hypertrophy of the prostate.

Sir Henry Thompson (*op. cit.*, p. 67) calls attention to the fact "that among the twenty-nine unaffected were individuals of greater age than among the affected portion. . . . The period of life between 55 and 65 is that during which the affection is most commonly developed. I have never been able to meet with any instance of its occurrence before 50 years of age. On the other hand, it appears rarely to commence after 70. Where it exists, the disease has generally made considerable progress before 70 or 75."

This author seems to regard the fact of the affected having a lower average age than the unaffected as favoring his conclusion that enlargement, "far from being a change natural to old age, is an exceptional condition" (*ubi supra*). In our opinion, this fact favors the developmental theory of enlargement; for *what is life but developmental death, progressional in its ante-mature stage, and retrogressional in its post-mature stage?* If this be true, as we fully

believe it to be, those who died earliest reached maturity soonest, and, as a consequence, acquired enlargement of the prostate, the developmental accompaniment of old age, earlier than those who were more slow in maturing (developing, dying) and for this reason were, on an average, less aged at death.

All men do not lose their procreative power at the same age: indeed, some do not lose it at all. Hence, all do not have enlargement at the same age, or, dying before they are affected by a declension in this particular, do not have it at all. There is much greater disparity in the ages of men at the cessation of the procreative faculty than among women.

It is well known that the females of many kinds of birds, after they have lost the faculty of reproduction from age or other cause, but principally the former, assume some of the secondary sexual characters of the male, as the plumage, voice, habit, etc. Though the reproductive functions probably cease before death in a majority of female birds, yet this phenomenon is exceptional, and not confined in its appearance to any uniformity in age. So it is with the prostate: the subjects of enlargement are exceptional, and not limited to uniformity in age.

Those authors who contend that enlargement of this body is not due to venereal excesses‡ found their argument on the fact that very chaste men sometimes have the enlargement, and, moreover, it does not occur in men in the prime of life, when they would be most likely to indulge to excess in venery.

All these facts are easily harmonized with our theory; for the man with strong passions finally exhausts his powers, and, as the enlargement always takes place very gradually, he may, as old age approaches, have an hypertrophy of this body. The very chaste man has little passion, because his virility is not of a high developmental character; he is of a sluggish, phlegmatic temperament; his generative powers are feeble, and, as a consequence, he has a greater tendency to revert towards the female type than a passionate, masculine man. He is constitutionally weak in this particular, and congenitally less highly developed. The reason the man of intense passion does not suffer from enlargement is because his organism is under the domination of a very highly developed sexuality, which is self-evident from simply reasoning from cause to effect.

Mr. John Adams§ "cannot doubt that there is some necessary connection between declension of the powers of the generative system and the enlargement of the prostate."

A curious coincidence in the developmental change taking place in these analogous organs of the male and female after the procreative faculty has ceased, is brought out in the author's paper|| on

* Medico-Chirurgical Transactions, vol. xliii., 1860, pp. 145-176.

† Prof. Samuel D. Gross, M.D., LL.D., D.C.L. Oxon., "A System of Surgery," in 2 vols., fifth edition, H. C. Lea, Philadelphia, 1872, vol. ii., p. 831. See also his work on the "Diseases of the Urinary Organs," Philadelphia, 1856.

‡ It is curious to note another of the opposite conditions which favor enlargement of the prostate, compared with conditions which favor cancer of the uterus, viz.: It has been maintained that celibacy favors the development of cancer of the uterus, though Mr. Lever considers that his tables, comprising one hundred and twenty cases of cancer of the uterus, afford a complete refutation. See his article in Med.-Chir. Trans., Lond., 1839, vol. iv. p. 271.

§ The Anatomy, Disease, etc., of the Prostate, London, 1851, p. 87.

|| "Deaths from Cancers occurring in Philadelphia from January 1, 1861, to

the proportion of sexes in deaths from cancer, with the proportion of women dying before and after the climacteric. It is there shown that 60.8 per cent. of all the women who die of cancer of the uterus have passed the climacteric period. The average age of all those who died of cancer of the uterus was 49.08 years. Cancer of the breast was still more fatal after the forty-fifth year, as 78.5 per cent. of the deaths from this cause were of persons above this age. The average age at death from cancer of the breast was 56.84 years. Of all the women dying of cancer, 28.66 per cent. die of cancer of the uterus. Women, being less highly developed* than men, are more liable to this developmental disease. We find in our table 2.32 females to every male dead from this cause.

M. Jolly, in his elaborate and exhaustive essay† of sixty-one pages on cancer of the prostate, considers that the rarity of the affection may possibly be a little exaggerated, though with all his assiduity he was able to collect only thirty-five reliable cases from the whole field of medical literature.

Professor Gross‡ says that cancer of the prostate is too rare and too little known to trace its history.

M. Tanchou§ found but five cases of cancer of the prostate among the 1904 men who died of cancer in Paris from 1830 to 1840. The proportion is 1 in 381 cases.

The writer, in his researches concerning cancer,|| found but two cases of cancer of the prostate body registered in the Health Reports of Philadelphia for the twelve years ending December 21, 1872. During this period, 788 men died of cancer in various organs. The proportion is 1 in 394 cases. One of these men was between 50 and 60 years of age at death, the other was between 70 and 80; both were natives of the United States.

M. Jolly† says, "Entre toutes les glandes, la prostate est une de celles qu'envahit le plus rarement le cancer. A une certaine époque, on avait même pensé que cet organe n'était jamais le siège de la dégénérescence, et c'est en France surtout que cette opinion a été défendue" (p. 377).

Jolly† (p. 592) gives the following table of particulars in the 35 cases he has collected:

From	1	to	10	years,	7	cases	(one in an infant of 9 months).
"	11	"	20	"	0	"	
"	21	"	30	"	2	"	

December 31, 1870; showing the Relative Proportion of Males and Females dying of this Disease, and the Percentage and Average Age of Women dying of Cancer of the Uterus,"—*Journal of the Gynecological Society of Boston*, September, 1872, p. 201-4; also, "Statistics of Philadelphia, etc., from 1861 to 1871,"—*Penn Monthly*, September, 1873, p. 24; also, "The Relative Viability of the Sexes," etc.,—*New York Medical Record*, June 16 and July 15, 1873, p. 9.

*"The Temperature of the Sexes an Indication of Relative Development,"—*Philadelphia Medical Times*, November 8, 1873; also, "The Laws of Transmission of Resemblance from Parents to their Children,"—*New York Medical Record*, August 15, September 15, October 15, and November 15, 1873, and pamphlet, p. 16; also, "An Inquiry into the Relationship between Development and the Sexual Condition in Plants, as indicated by Certain Heterogeneous Anomalies in the Arrangement of the Flowers of Zea Mays (Indian Corn),"—*The American Naturalist*, Salem, Massachusetts, 1873.

† *Essai sur le Cancer de la Prostate*, par Jacques Jolly, Interne lauréat des Hôpitaux, Archives Générales de Médecine, Paris, 1869, vol. i. pp. 577-594, 705-722; vol. ii. pp. 61-74, 184-198; in all, 61 pp.

‡ Professor Samuel D. Gross, M.D., LL.D., D.C.L. Oxon., "The Discharges of the Urinary Organs," Philadelphia, 1856, p. 179, et seq.

§ *Recherches sur le Traitement médical des Tumeurs cancéreuses du Sein*, Paris, 1844.

|| Deaths from Cancer in Philadelphia, etc., etc. See further, above, from *Journal of the Gynecological Society of Boston*, September, 1872, pp. 201-4.

From	31	to	40	years,	3	cases.
"	41	"	50	"	3	"
"	51	"	60	"	9	"
"	61	"	70	"	9	"
"	70	"	80	"	1	"
Total					35	"

The writer has brought forward several facts and arguments in the papers already mentioned, tending to show that the woman occupies an intermediate developmental or evolutionary position between children and men; in short, she is less highly developed than the man. It is also well known that females, when deprived of the domination of the ovaries, either by congenital absence, ablation, disease, or the natural cessation of the procreative function, take on some of the secondary sexual characters of the male, or, in other words, become masculine. Any of the same processes would operate to make the male effeminate. So we see that the female under such circumstances approaches the condition of the male, by a sort of progressional development, and the male, by a kind of retrogressional development, approaches that of the female; that is, they both tend to the intermediate sexual condition of hermaphroditism, the male being naturally above it, and the female below it, developmentally. One is reminded of Tennyson's¶ admirable philosophy in this.

This approach is not only true of the sexual organs, but also of the composition and functions of other parts of the body. Thus, in old age (second childhood) the blood was found by Dennis Le Caull, and Foedisch to contain a larger proportion of water than in ripe maturity, approaching in its composition to that of children in this particular. The temperature** of the aged is lower, and the pulse more frequent, than in persons of middle age, approaching also in this particular to the condition in childhood.

It is not difficult, then, to understand that the prostate body, which remains undeveloped in the male so long as the organism is under the domination of the reproductive organs (testicles), should begin to develop when this influence is removed. So in the woman, when the reproductive faculty is extinguished at the menopause, or by ablation or disease of the ovaries, the uterus, which is the analogue of a part of the prostate in the male, degenerates, shrivels up, and is reduced in size. The uterus in the female diminishes in size from the same cause that the prostate increases in size in the male, viz., the deprivation of the domination of the sexual organs (testicles or ovaries). It would be interesting in cases of enlarged prostate to inquire whether there is loss of, or diminished, sexual power or vigor, as confirmatory of this theory.

It is no argument against this theory that enlargement does *not always* occur in old age, as one might imagine from the statements of the authorities cited; for all males or females, even when deprived of the essential organs of reproduction, do not develop

¶ "Yet, in the long years liker must they grow;
The man be more of woman, she of man."

The Princess.

** See further in the writer's paper on "The Temperature of the Sexes an Indication of Development,"—*Philadelphia Medical Times*, November 8, 1873, p. 3.

secondary sexual characters of the opposite sex, though it is the rule for them to do so.

It is a rule, therefore, that enlargement of the prostate occurs in the aged (being indicative of decline in, or extinction of, the procreative faculty) for the same reason and under the same circumstances that atrophy of the uterus takes place in the aged woman; both indicating a developmental determination towards an intermediate (hermaphroditic) sexual condition, caused by the elimination of the domination of the essential organs of generation (testicles and ovaries).

This theory is strongly corroborated by the fact of the very great frequency of cancer of the uterus (of all the women dying of cancer, 28.66 per cent. die of cancer of the uterus), and the very great rarity of cancer of the prostate body (of all the men dying of cancer, only .27 per cent. die of cancer of the prostate).

Now, it is well known that cancer is a degenerative process or retrogressive developmental disease, and attacks the mammæ, or glandular organs, and the uterus, a muscular organ, usually after they have ceased to perform their destined functions connected with reproduction. This being true, it is curious to note that the prostate is more or less enlarged in from 20 to 35 per cent. of all men dying after the fiftieth or sixtieth year; yet of all the men who die of cancer, only .27 per cent. die of cancer of the prostate, it being more than one hundred times less frequent than cancer of the uterus. The conclusion is, therefore, that, cancer being a disease which attacks organs that are degenerating, and itself further degenerating and destroying them, *the enlargement of the prostate body is not a retrogressive but a progressive developmental evolution of a congenitally under-developed homologue of the uterus.*

The fact being established of the development of female organs and secondary sexual characters in old men, that is, a tendency towards hermaphroditism (which latter is an intermediate state between the separate male and female condition), is altogether in favor of an opinion which we have deduced from numerous observations, viz., that *the type of all diœcious species is sexually hermaphroditic*; that is, the man is as much above the type as the woman is below it.

We conclude, therefore, that *simple enlargement of the prostate body, far from being a diseased condition, is frequently, and indeed generally, but one of the exhibitions of the vibrations in the pendulum of developmental or evolutionary forces which determine and separate the sexes.*

PHILA., 2003 WALNUT STREET, December, 1872.

SO-CALLED PSORIASIS SYPHILITICA.

BY LOUIS A. DUHRING, M.D.,

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MY object in the present communication is to ask attention to an error in nomenclature. A definite and accurate system of words is in reality of greater importance to the progress of a science

than the majority are willing to admit. Nomenclature is to the scientific circle what language is to the people. It is an essential, without which there exists no means of conveying clear and distinct ideas from one individual to another. All science demands this *system*, and the more intelligible and perfect it is, the more easily will a knowledge of the subject be imparted. The more accurate and definite it is made, the more refined and exact will the science become. Too much care and attention cannot be exercised in guarding the subject, whatever it is, from ambiguity.

Dermatology at the present day needs a thorough remodelling of its *vocabulary*. Year by year incorrect, loose, meaningless expressions have been allowed to enter the list, until it has become so burdened and complicated with superfluous terms that the student entering upon the study of this subject becomes at once confounded and lost in the phraseology.

Among the expressions which are commonly used to denote certain varieties of skin-disease are to be found a number of *compound words*, of which no more unfortunate example can be presented than the so-called "psoriasis syphilitica." This term, originally intended to express a variety of one disease, is a very bad one, for it is calculated to mislead as to the nature of the affection. Let us investigate more closely. What are we to understand concerning the disease by the term psoriasis syphilitica? What is its nature? and, possessing such a name, where should it belong in classification? What is the student expected to know when he hears this expression? He is aware, perhaps, of the existence of two separate diseases of the skin, psoriasis and syphilis; he knows that psoriasis usually shows itself in uniform characters, and that, on the other hand, syphilis may appear in many different forms. But now he hears of and sees a "psoriasis syphilitica," a syphilitic psoriasis, and he is at a loss to comprehend the nature of the disease. The question arises, is it a psoriasis, a psoriasis vulgaris, such as is seen every day in connection with a clinic for skin-diseases,—a psoriasis influenced and altered by the poison of syphilis, and hence syphilitic? Or, on the other hand, is it a manifestation of syphilis modified by the presence of psoriasis? Or, again, is it merely a cutaneous form of syphilis bearing a resemblance in appearance to psoriasis? The first of these suggestions, that it is a *bona fide* psoriasis changed by syphilis, would certainly be the more justifiable inference from such an expression as psoriasis syphilitica. But such is by no means the actual condition. The disease which really exists in the so-called psoriasis syphilitica is not psoriasis at all, but syphilis. *There is not a sign or trace of psoriasis present.* This infiltrated, partially papular and squamous form of syphilis has received the name psoriasis syphilitica simply from its resemblance in appearance to psoriasis, a disease with which, however, as just stated, it is absolutely in no way associated. If this then be true, it is very evident that the term is a misnomer. Such it is, and as such it should be discarded. It has crept into our nomenclature through carelessness, as many other loose expressions have

done, but so manifestly inaccurate and dubious is it, that no time should be lost in abandoning it for something more definite. Let a term be generally adopted which will afford some idea of what the disease really is. The morbid process is syphilis, pure, unalloyed, manifesting itself upon the skin. It is a syphiloderm of a squamous form: hence the expression squamous syphiloderm has at least the advantage of conveying a clear conception as to the nature of the affection. Why make use of a compound word, composed of the names of two diseases so widely different as psoriasis and syphilis, for the purpose of expressing a form of *one* disease? Psoriasis and syphilis are two distinct pathological as well as clinical processes, having nothing in common. Why use the word psoriasis at all? There is no psoriasis present. Two distinct diseases are here compounded merely because one affection occasionally happens to bear some likeness to the other. Syphilis is made an adjective to qualify psoriasis, a condition which *does not exist* in connection with the so-called psoriasis syphilitica. Now, in the first place, the name of a disease should *never* be used as an adjective. Nor should the name of an already well-known disease ever be employed for the purpose of describing another affection. A disease should possess one name, and that name be retained exclusively to represent that disease.

Psoriasis syphilitica is a meaningless and inaccurate expression, and inevitably causes confusion and doubt in the mind of the student. Such terms are most disastrous to the advancement of dermatology, and should not be suffered to remain in our *language*. It is proper time that attention be given to the purifying of our nomenclature, and that all ambiguous and superfluous terms be abolished. Let us at least make the attempt to adopt a system of expression which will convey some idea of the subject to the intelligent student.

NOTES OF HOSPITAL PRACTICE.

PENNSYLVANIA HOSPITAL.

SERVICE OF DR. R. J. LEVIS.

Reported by JOHN B. ROBERTS.

EXCISION OF THE ANKLE-JOINT FOR CARIES OF THE ASTRAGALUS AND INFERIOR EXTREMITY OF THE TIBIA.

A BOY has been in the hospital some time with disease of the bones of the foot, which is much swollen and has a large number of sinuses, all apparently leading in the direction of the astragalus, though there is probably disease of the tibia also, for the lower end of that bone is much enlarged. It is impossible to determine how extensive is the caries in the vicinity of the joint, without making a complete exploration of the parts by cutting down upon them.

If the disease is limited to the bones immediately concerned in the articulation, it may be possible to retain the foot by excising the ankle-joint; but if the bones are extensively carious, and especially if the calcaneum is involved, some form of amputation of the foot at or above the ankle will be required; though conservatism will be an object of consideration, in order to give the patient all available utility of the member.

If it were certain that excision of the joint would be proper in this case, an incision would be made upon the external aspect of the foot, and the astragalus dislocated outwards; but as a thorough examination of the condition of the bones must be made prior to a decision as to the character of the operation to be adopted, a free incision is made directly across the top of the foot, from the external to the inner malleolus, freely exposing the interior of the joint. This incision necessarily cuts off, upon the dorsal surface of the foot, the extensor tendons and divides the anterior tibial as it becomes the dorsal artery of the foot; but care is taken to avoid injury of the posterior tibial, upon the integrity of which will depend the nutrition of the foot, if excision is to be finally performed. Examination of the parts thus exposed shows the entire astragalus to be carious, as is also the lower portion of the tibia, the end of which shall therefore be sawed off, after the other bone has been removed by the gouge.

The measure finally adopted will very much depend upon the condition of the calcaneum, for if this is healthy it will determine the performance of resection of the ankle, provided that the other tarsal bones are sufficiently free from disease to permit their retention. If these latter, however, must be removed, it can be left to form part of the stump of a Pirogoff amputation; but if it also is carious, an amputation of the leg above the ankle will be necessitated.

Fortunately, it is found that the disease is limited to the end of the tibia and to the astragalus, and that the other bones of the tarsus are perfectly healthy. After a careful removal, then, of all portions of diseased osseous structure, the foot will be brought up into apposition with the sawn end of the tibia and fibula, and sutures introduced to hold the tissues together constituting a complete excision of the ankle-joint.

Excision of the ankle-joint has not been very popular with surgeons, but in many instances exceedingly good results have been obtained after the operation. Dr. Levis mentioned a case, and showed a cast of the foot taken recently, where he had performed excision of the ankle fourteen years ago; and he believed it to be the first excision of that kind performed in this country. He stated that the girl was now able to walk gracefully, and even to dance upon the foot; for, although the ankle-joint is necessarily ankylosed, there has gradually been acquired a great latitude of motion between the other tarsal bones, so that the foot has regained a considerable amount of elasticity.

This boy, upon whom excision of the ankle-joint was performed six weeks ago, has been doing quite well since the operation; and, although he cannot yet bear his entire weight upon the foot, he has greatly improved in general health. There are here several sinuses leading to the joint, which render it probable that there may be some further caries of the bones, which, if present, will necessitate a slight operation for its removal before the patient will be entirely well; but it is certainly gratifying to think that the boy's foot was not sacrificed by amputation at the inferior third of the leg.

JEFFERSON MEDICAL COLLEGE.

CLINIC OF PROF. S. D. GROSS, M.D.

Reported by J. B. ROBERTS.

PROLAPSE OF THE RECTUM CAUSED BY THE PRESENCE OF A VESICAL CALCULUS—LITHOTOMY—CURE OF THE PATIENT.

THIS little boy, four years of age, has had, since he was one year old, symptoms of cystitis; and the great straining during micturition, which has continued down to the present date, has caused an enormous pro-

trusion of the bowel. This prolapse of the rectum, having existed for about two years, has been out for three months past without replacement, which it is said cannot be effected, and it is now five and a half or six inches in length. The length of the protrusion is so great that it is exceedingly probable that a portion of the sigmoid flexure of the colon is involved in the prolapse, as well as the rectum.

Prolapse of the bowel may be partial, as where merely a part of the mucous membrane of the intestine is found projecting beyond the anus; or complete, as in this instance, in which all the coats of the tube protrude, from invagination of the lower part of the alimentary canal.

The habitual contact of the delicate mucous membrane with the air and the urine which dribbles over it, has induced inflammation, giving rise to redness of the parts and the secretion of a muco-purulent fluid: indeed, in such cases it occasionally happens that strangulation of the protruded bowel occurs, from the pressure exerted by the sphincter muscle; but this complication, fortunately, is quite infrequent.

The cause of the affection is usually the straining incidental to chronic diarrhoea or dysentery, ascariides, vesical calculus, and similar diseases, associated with a relaxed condition of the floor of the pelvis and the muscular structures about the anus. The history of this case shows that the boy has great pain in the region of the bladder, and is troubled with frequent micturition, being unable to retain his water longer than half an hour: hence it is probable that there is a stone in the bladder, which, from the straining consequent upon its presence, has been instrumental in the production of this enormous prolapse of the rectum.

Upon the introduction of the sound, there is perceived, without the least difficulty, a stone, lying low down, and situated, apparently, directly at the mouth of the bladder, which has undoubtedly been the exciting cause of all this trouble. In order, then, to cure the patient, the extraction of this stone is demanded, for as long as it remains in the bladder it is useless to reduce the prolapsed bowel, which would be again protruded immediately upon the occurrence of straining, which will continue as long as the calculus remains.

The protrusion of the rectum renders the performance of lithotomy somewhat difficult, as it interferes with the introduction of the finger into the bowel, compels the operator to cut directly for the staff, and renders the exercise of extreme caution necessary to avoid injury to the gut.

The bladder having been injected with tepid water, I proceed to perform lithotomy by the lateral method, —entering the knife three-quarters of an inch above the anus, and cutting obliquely downwards a little below the rectum and midway between that viscus and the tuberosity of the ischium. The incision is first carried through the skin and superficial fascia, after which a portion of the levator ani, the transversus perinei, the triangular ligament, the membranous urethra, the prostate gland, and the neck of the bladder are successively divided. But it is unnecessary to describe more minutely the various steps of an operation which has been performed in your presence four times already within the past three months.

After the bladder has been opened, the calculus is seized by means of forceps, and withdrawn only with a great deal of difficulty, for the stone is nearly an inch and a half in length.

Replacement of the rectum will not be undertaken at this time, because there will be considerable tenesmus for a few days after the extraction of the stone: the mucous membrane, however, will be protected from the urine with which it must come in contact, by means of ointment of the oxide of zinc.

To-day the reduction of this prolapsed rectum will be attempted, for the boy has been doing exceedingly well since I removed from his bladder, eleven days ago, the largest stone, weighing six and a half drachms; and there is not now that tendency to straining which generally exists for some time after the performance of lithotomy. The reduction is effected by gradually pushing up the bowel with the fingers, which have been previously oiled, in such a manner as to replace first that portion of the intestine which escaped last. By delicate manipulation the object is accomplished in this case without much difficulty, after which the action of the bowels will be controlled by opiates, and a compress held by a T-bandage applied under the perineum, to support the parts and guard against a reproduction of the displacement.

Here, walking before you, is the little patient who came to the clinic three weeks ago suffering from great prolapse of the rectum consequent upon the existence of vesical calculus. The perineal bandage applied at the time the bowel was replaced has been dispensed with for two days without any further protrusion, and now the boy, who for two years has been unable to stand or sit up, can walk about without inconvenience, so that to-day his mother will take him home cured.

TRANSLATIONS.

THE PATHOLOGY OF INFANTILE PARALYSIS.

IN the beginning of the year 1873 (Professor Roth, in *Bâle, Virchow's Archiv*) there died from diphtheria in the hospital at Bâle a boy who was suffering from spinal paralysis; and Professor Roth, through the kindness of one of his colleagues, had the opportunity of consulting the notes of the case and of making the autopsy.

The patient, a boy aged two years, was the son of a prostitute, and in the early part of the year 1872 could walk, but in February of that year, after an attack of some febrile affection, lost the power of locomotion. At his admission into the hospital in August there was incomplete paralysis of both lower extremities, which, however, was more complete upon the right side than upon the left. Under the application of electricity, the power of progression improved so much that the boy was at last able to walk, although there was frequently some dragging of the right foot. The diphtheritic deposit made its appearance upon the tonsils on the 21st of December, accompanied by an ill-smelling discharge from the nostrils, and was followed on the 27th by albumen in the urine, and œdema of the face and limbs. On the 4th of January, 1873, the boy died, eleven months after the appearance of the paralysis. The autopsy was made on the 5th, when the various organs of the body were found in the following condition. The limbs were very œdematous, and the various cavities of the body were dropsical. The tonsils were contracted by cicatrices, but there was no longer any diphtheritic deposit noticeable. The left ventricle of the heart was dilated, and there was a clot of the size of a cherry at its apex. The spleen was moderately enlarged, and the kidneys were larger than normal, and white and dense. The brain was not particularly altered, but the vessels of the pia mater were dilated and œdematous. When the dura mater of the cord was opened, a small quantity of fluid was discharged, and some adhesions of slight strength were found between the dura and pia mater, upon the posterior

part of the cord in the lumbar region. The larger blood-vessels of the same region were found much contorted and distended with blood. The anterior roots of the cauda equina were partly atrophied, were flattened, and appeared gray by transmitted light. When a transverse cut of the cord from the lumbar region was made, the gray substance of the anterior horns appeared of a dirty grayish-white color, indistinctly bounded towards the lateral fibre. In the dorsal cervical region the gray substance was of the normal hue and distinctly bounded; the posterior fibres, however, appeared more gray in color. Microscopic examinations were made of sections taken from various parts of the lumbar region of the cord, with the following results. In a transverse section made through the lower posterior fibres of the lumbar portion 23 mm. above the filum terminale, a very striking change in the anterior horn of the right side was found. Numerous nucleated cells were noticed, some of which were scattered through the tissues, while others were arranged in rows along the larger vessels, to the exterior coat of which they were attached. Between these cells there was a net-work of firm fibres analogous to fibres of connective tissue.

How far nerve-fibres were connected with this network was not determined. In this part of the section the multipolar cells had for the most part vanished; only after coloring with carmine and treating with Canada balsam could some solitary small ganglion-cells be noticed. Nerve-fibres containing marrow, which are usually seen running in the anterior horns both singly and in bundles, occurred only occasionally. These changes were noticed also in the base of the posterior horns, where some vessels covered with cells containing fatty nuclei could be seen running through the white substance towards the anterior notch and the anterior root. The bundle of axis-cylinders running from the gray substance towards the anterior root was contracted, and resembled dense fibres of connective tissue, while the region surrounding the central canal was normal. The anterior horn upon the left side appeared normal; the multipolar cells were numerous and of normal size.

For purposes of comparison, the anterior roots of the right and left sides were teased out, and upon examination the changes, as in the spinal cord, were found more pronounced upon the right side than upon the left. By the examination of sections of the cord at various positions, it was found that the evidences of inflammation extended through the entire length of the lumbar region, and that they manifested themselves in their greatest intensity in the middle and lower parts of that region, becoming gradually less marked above and below.

Professor Roth concludes from the post-mortem conditions that there existed eleven months before death, as the cause of the paralysis, an interstitial myelitis of the lumbar portion of the cord, situated especially in the gray substance of the anterior horn. The clinical observation that the paralysis was more marked upon the right side than upon the left agrees with the more marked evidences of inflammation found upon the right side.

The points at which the inflammatory products were found presented not only evidences of atrophy of nerve-fibres, but also an almost complete absence of large multipolar ganglion-cells. The consecutive atrophy of the anterior horn can be explained by the absence of nervous elements from the myelitic deposit, and this is more noticeable upon the right side than upon the left. From this it is certain that some cases of infantile paralysis are due to a myelitis of the anterior horns occurring at an early age as a consequence of acute disease. In other cases, however, the gray substance is not in-

volved, but the paralysis is due to a myelitis of the motor portion of the white substance of the spinal cord.

WILLIAM ASHBRIDGE, M.D.

GLYCOSURIA FROM THE ADMINISTRATION OF NITRO-BENZOLE.

DR. CARL ANTON EWALD, of Berlin (*Centralblatt f. die Med. Wissenschaft.*), has found that after subcutaneous injections of nitro-benzole in the guinea-pig, in quantities from 0.5 to 2 grammes, its urine upon being treated with animal charcoal affords a substance which possesses reducing powers and gives the characteristic reaction of sugar. This phenomenon is noticed as early as three hours after the experiment has been made, and continues until twenty hours have elapsed; and at the end of twenty-four to thirty-six hours traces of sugar have entirely vanished from the urine. The amount of sugar found is greatest four hours after the injection, when it reaches 1.9 per cent. But this may not be accurate, since a quantitative analysis of the urine was not made in all cases. In regard to the question of the influence of the splanchnic nerve upon the production of sugar in the urine, no conclusion was attained, because the animals which had been subjected to this operation died before the time requisite for the appearance of sugar had elapsed. In his experiments upon dogs he was unsuccessful in producing glycosuria by administering nitro-benzole hypodermically, but after giving it by the mouth sugar appeared in the urine in large quantities. If the different results from these experiments upon two classes of animals are constant, they may afford, upon the one hand, evidence of a characteristic difference in the action of the drug upon herbivora and carnivora, and, on the other, some clue as to the rationale of the production of sugar in the urine by the substance in question.

WILLIAM ASHBRIDGE, M.D.

POISONING BY CANTHARIDAL COLLODION.

DR. ERNST SCHWERIN, of Berlin, reports a case (*Berliner Klinische Wochenschrift*) of poisoning with cantharidal collodion. The patient, a woman aged twenty-three years, swallowed, through mistake, fifteen drops of the preparation. After about an hour had elapsed she was attacked with cramps in the lower part of the abdomen, for which, previously to sending for a physician, numerous household remedies were used. The doctor upon his arrival found the patient running about the room, with the arms crossed upon the abdomen, stopping after every few steps to void a few drops of urine, the passage of which was attended with intense pain. At times she fell into a species of catalepsy. The pulse was small and of moderate frequency. For some days albumen was found in the urine. Under treatment, she at the end of a few days was entirely recovered. It is interesting to notice that the sexual passion was not at all excited by the drug; and this goes to confirm the opinion of later observers, that the older physicians were mistaken in attributing aphrodisiac qualities to it.

WM. ASHBRIDGE, M.D.

ACTION OF ERGOT ON THE BLADDER (*Le Progrès Médical*, December 27, 1873).—Dr. Wernich affirms that the repletion of the bladder so often observed after the administration of ergot is due not only to a retention of the normal urine, but still more to a hypersecretion of the same fluid, provoked by the medicament.

PHILADELPHIA MEDICAL TIMES.

A WEEKLY JOURNAL OF

MEDICAL AND SURGICAL SCIENCE.

The Philadelphia Medical Times is an independent journal, devoted to no ends or interests whatever but those common to all who cultivate the science of medicine. Its columns are open to all those who wish to express their views on any subject coming within its legitimate sphere.

We invite contributions, reports of cases, notes and queries, medical news, and whatever may tend to increase the value of our pages.

All communications must bear the name of the sender (whether the name is to be published or not), and should be addressed to Editor Philadelphia Medical Times, care of the Publishers.

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SATURDAY, FEBRUARY 14, 1874.

EDITORIAL.

MEDICAL JURISPRUDENCE.

A FEW weeks since, a Mr. James A. Grant died suddenly at Greensburgh, New Jersey, under circumstances which were deemed suspicious, and a coroner's inquest was the result. The manner of conducting this inquest and the circumstances of the case seem to us so illustrative of the atrocious system of medical jurisprudence under which we live, liable at any time to be persecuted even to the death by the ignorance or recklessness of doctors, judges, and juries, that we have extracted the following summary of the testimony from the *Trenton Daily State Gazette* of January 10, 12, and 13:

"Dr. Abraham Livezey testified that he was a druggist and office-physician; remembered a little girl coming to his store with a paper on which was written, 'Rad. sarsaparilla, half a pound; hydriodot. potassæ, drachms four.' He weighed out the first article, took down the bottle containing the second and directed his clerk to weigh out the required amount, tasted it, remarked that it was 'salty,' and gave it to the girl. He had never sold any cyanide of potassium to any one, and kept the bottle containing it on the opposite side of the store from the one which held the iodide. All the packages he put up were marked. His clerk corroborated his testimony in every respect, and swore that he had read the words 'potassium iodide' on the bottle.

"Emma Grant testified that she had obtained the drugs as above described, but that only the package containing the sarsaparilla was marked, and that when Dr. Livezey tasted the medicine he said it was 'very bitter,' and that he 'pitied the person who had to take it.'

"Mrs. Grant gave an account of her husband's previous sickness, which was trifling. She had received the packages from her daughter, and about 7 A.M. on the following morning she mixed the white powder with twelve tablespoonfuls of water, and gave him two teaspoonfuls of the solution, followed by some tea to remove the taste, which, he said, was very bitter. Just as she turned away he threw himself down on his back, his face became extremely flushed, he turned and twisted as if in spasms, he gasped for breath, was entirely speechless, and died about eight o'clock.

"Dr. J. L. Bodine testified that he had made the post-mortem examination, and had found the lungs, liver, heart, spleen, brain, and kidneys healthy; that the stomach was ligated at both extremities and then removed from the body, and that on opening it there was an 'unmistakable smell of prussic acid or cyanide of potassium.' He was of the opinion that death had resulted from a poisonous dose of the latter drug.

"Drs. C. L. Minster, J. L. Taylor, and J. T. Corson were present at the autopsy, and corroborated the statements of the previous witness. They all agreed that the odor of the contents of the bottle from which the dose had been given, and that of the stomach, were identical.

"Edward Grant swore that he took a bottle from the room in which his brother died, and on the same morning gave it to a female friend, who put it in a closet, from which he took it in the following day and carried it to Dr. Isaac James, who testified that he had determined it was cyanide of potassium by 'the smell and the caustic effect on the skin.' He in his turn had kept the bottle until the next day, and had then sealed it and given it to the coroner.

"Dr. John W. Scudder swore that he had written the order as above, and had given verbal directions as to the mode of administration: when he reached the house the following morning the patient was dead. Mrs. Grant handed him a bottle, and said she was afraid she had given the wrong medicine; he tasted it, but detected nothing unusual in regard to bitterness; was present at the post-mortem, and agreed with Dr. Minster and the others.

"The jury, after deliberating for two hours, brought in the following verdict:

"We, the jury called to inquire into the cause of the death of James A. Grant, of the township of Ewing, in the county of Mercer, do find that the said James A. Grant came to his death on the sixth day of January, A.D. 1874, at his own residence in the township aforesaid; that he came to his death by having had administered to him a dose of cyanide of potassium.

"The jury aforesaid do further find that said medicine, taken as aforesaid, was sold by one Abraham Livezey, in Yardleyville, Pa., on Monday afternoon, the 5th day of January, A.D. 1874, on an order or memorandum written by Dr. John Scudder, and furnished for the use of the said deceased as iodide of potassium, but which, in the opinion of the jury, was cyanide of potassium, a poison, and that the putting up of said

medicine by Abraham Livezey aforesaid was an act of gross carelessness on the part of said Livezey.

"And the jury do further say that some stringent legislation is necessary in regard to the sale and compounding of poisonous drugs, by which the fatal mistakes so frequently occurring may be avoided, and the lives of the people better protected."

We might well draw a moral from the above sad story, as to the sins of apothecaries and the laxity of the law, but we forbear, and ask attention only to the medical testimony. Fortunately, we are spared this once the pitting of the so-called expert against expert; but as so much room has been left for this by the culpable laxity of the procedure, if the case ever comes into court, and Dr. Livezey finds it worth while to make a harder fight, we shall probably have another of these peculiarly American performances. In the name of decency, we ask, why was not a chemist employed to determine the presence or the absence of cyanide of potassium in the solution?—a question of a few moments' work. Instead of this obviously proper proceeding, although one doctor is represented as swearing that he tasted the deadly solution and could not perceive anything wrong, medical witnesses smell the corpse and smell the bottle, and parade their opinions that death was from prussic acid. These medical witnesses, it may be, were right in their opinions; but in cases of poison to opine when one can prove is simply to sin against society, to mock at justice, and to degrade, if it be possible, American medical jurisprudence.

It is an easy task to pull down, but often a very hard one to build up anew; and it is therefore with unfeigned pleasure that we have read an article by Dr. John Ordronaux (*American Journal of Insanity*, January, 1874) in which the learned doctor proposes a scheme that seems at first sight eminently practicable.

He very truly says that the basis of all the trouble is the refusal of the courts to accord any distinct legal status to experts, and shows, as we have previously insisted upon, that the real fault lies not with qualified experts, but with the courts and their utterly stupid and contradictory rulings. In a recent case tried at Annapolis, we saw a learned judge seriously decide that a man was not sick because he was going about, and, therefore, refuse to receive evidence proving that he was sick.

The fundamental idea of the plan proposed by Dr. Ordronaux is to remove the experts from the sphere of the witness and to give them a quasi-judicial authority. The matters in question are to be submitted for trial to a commission composed

of three experts (one appointed by the court and one by each of the contestants), precisely as issues of fact are sent by courts of equity to be tried before masters in chancery. This trial is to be preliminary to that before the court, in order to save the time of the latter.

This plan is very probably the best for cases of lunacy, and, it may be, in many other instances. But in poisoning-cases it may happen that the facts upon which judgment is to be formed are so different as told by the opposing witnesses as to require two distinct opinions; and it may be also that the facts are brought out only upon the cross-examination of the witnesses at the trial. For these reasons, any opinion framed before the trial would evidently be premature; so that we conceive that the facts should be submitted to the commission as fast as developed during the trial,—the opinion to be delivered at the close, after the evidence is all in. It would be a very rare case that would require more than a night for the commission to frame its opinion under the above circumstances.

IF nothing that a medical journal can say can affect our advertising hospital brethren,—if Siamese twins are to be made the platform for advertising only less monstrous than the subject which affords its pretext,—if the itch for notoriety which afflicts so many of the profession can't be cured by the counsel of brethren, we trust the following, taken from the *Galaxy*, a secular magazine, may reach at least one case:

"A social or political committee embraces W. M. Evarts, D. Webster, C. Cushing, and so on; but always G. Washington Squills, M.D., or, more modestly, Dr. G. W. Squills. For example, we see in the newspapers a public notice like this:

"The undersigned beg their fellow-citizens to unite in honoring with fit ceremonies the approaching anniversary of the birthday of Washington.

C. Cushing,	David D. Porter,
Dr. Timothy Tubbs,	W. T. Sherman,
Henry Ward Beecher,	T. W. H. Gallipot, <i>M.D.</i>
Gideon Welles,	Charles Sumner.'

"Are not such shows of titles a trifle ridiculous? Mr. Beecher does not write his 'Rev.' before his name, nor does Charles Sumner tail his LL.D. after it: it is only Tommy Gallipot that stickles for these things. I should think a doctor would feel cheap in thus advertising himself in an affair that has nothing to do with drugs, as in some matter of a committee upon a charity, or a flower-show, or a Christmas ball, or a testimonial to the genius of a nigger minstrel, or the celebration of the Fourth of July. But no; the smallest fry of a physician displays his titular grandeur alike when signing

his name to a communication on politics in the morning newspapers, or when leaving a visiting-card at his friend's in an unprofessional call."—*Galaxy for January.*

OWING to a mistake in a hastily-written letter, we were misled in regard to our figures as to the amount appropriated annually by Congress for the Army Medical Library. The usual appropriation has been five, not fifty, thousand dollars, and it is that sum which was asked for this year by those in charge of the library. On February 5 the appropriation asked for (five thousand dollars Army Medical Library—five thousand dollars Army Medical Museum) was restored to the bill in the House of Representatives.

PROCEEDINGS OF SOCIETIES.

MEDICAL SOCIETY OF THE COUNTY OF ALBANY, NEW YORK.

SEMI-MONTHLY MEETING, JANUARY 14, 1874.

DR. JOHN SWINBURNE in the chair.

BY resolution, the President appointed a committee of Drs. Blatner, Freeman, and Bigelow to draft resolutions in reference to the death of Dr. J. H. Lasher; and a committee of Drs. James McNaughton, Boyd, and Quackenbush, to take similar action in reference to the death of Drs. Peter Van Buren and John F. Townsend.

DEATH FROM CALCULUS IN THE URETHRA.

DR. E. R. HUN reported the following interesting case:

W. J., æt. 53, came January 26, 1873, complaining of difficulty and pain in passing water. He stated that while in the British army, twenty-four years ago, he contracted gonorrhœa, for which he was treated by astringent injections, which put an end to the discharge in a few days. For the next ten years he had no further trouble, until he suddenly was unable to pass water. The catheter was resorted to effectually, and for some time he had no further symptoms. About six years ago he observed that the stream of urine was becoming smaller, and that it took him a long time to empty the bladder; and said that a few years ago, after retaining his urine for some time and making forcible effort to expel it, he passed two or three small, gritty particles which occasioned very considerable pain. During the past three years he has never been able to pass water freely, and has several times suffered from retention, which has been relieved by warm baths and various internal remedies advised by friends.

His urine now was expelled drop by drop, and his underclothes were constantly wet with it. He was emaciated, and too feeble to do ordinary work. He did not rest well at night, and had but little appetite.

Upon attempting to introduce a silver catheter, it was arrested about an inch from the meatus by a firm, unyielding stricture. A No. 2 olive-pointed bougie could be passed through this stricture, but encountered another about two inches farther back, through which it was passed with difficulty, although stiffened by the introduction of a wire stilet. A third stricture was met with in the membranous portion of the urethra, after passing which, the instrument entered the bladder. Upon removing the bougie and examining it, he was

surprised to find it cut and scratched on its exterior as if it had been drawn on some hard and jagged body. Dr. Hun then felt along the urethra, and found a calculous mass lying between the second and third stricture which could be pushed up and down the urethra. He endeavored to dilate the anterior stricture by graduated bougies, but it was so firm and unyielding that he made no headway.

A short time after he first saw the patient, the State Society met in Albany, and Dr. Otis, of New York, exhibited his new urethrotome, which he (Dr. Hun) thought would be just the instrument for such a case as the one above described, and therefore asked him to meet the patient at his office, which he did, and tried to introduce the instrument. The stricture, however, would not admit it, and Dr. Otis then tried to enlarge the passage with a Maeraman's urethrotome. After considerable difficulty, he succeeded in passing through the largest-sized blade of Maeraman's, and followed it with his own instrument, but not without using force, so dense and unyielding were the fibrinous bands forming the two anterior strictures. The doctor then, by means of the screw in the handle, opened the blades of his instrument so as to dilate the strictures preparatory to dividing them, but after a few turns of the screw the blades became clogged with the calculous material contained in the urethra, and he could neither open nor shut it. He managed to withdraw it with great difficulty, and the pain occasioned by the process was so great that the patient refused to allow anything more to be done, and insisted upon going home. He was seen the next morning by Dr. Hun, who found the penis much swollen. He had passed only a few drops of urine, and the bladder was distended. He was advised to have the calculus removed by external urethrotomy, and allow exit to the urine, but obstinately refused. He persisted in his refusal for four days, although in the mean time he suffered great pain, and the urine only came away drop by drop.

On the fifth day after Dr. Otis had seen him, he consented to go to St. Peter's Hospital, when he was at once etherized, and Dr. Swinburne opened the urethra just in front of the posterior stricture, when the calculus, one inch in length, and sufficiently large to fill the urethra, besides small pieces of gravel, was removed. The gum-elastic catheter was then passed into the bladder, when a large quantity of offensive urine passed off. The whole penis was sloughing from urinary infiltration; the scrotum and several points in the groin were incised, and gave vent to purulent matter having a strong urinary odor. The patient gradually sank, and died forty-eight hours after the operation.

No autopsy could be obtained.

Dr. Hun remarked that from the size and shape of the calculus it must have been in the urethra for a long time, and that it was an interesting point to determine whether it originally formed in the dilated portion of the urethra between the two strictures, or whether it passed from the bladder as a small particle of gravel and afterwards increased in size by the deposit of phosphatic matter from the urine, which was constantly retained in the pouch in which it was found. The doctor favored the latter opinion, from the fact that particles of gravel were found with it. He remarked that, from his experience in this case, he should not attempt to dilate the stricture, but would perform at once external urethrotomy, in similar cases.

DR. HENRY MARCH mentioned five interesting cases among those having occurred in the practice of his father, Dr. Alden March.

OLD EYES MADE NEW—INTRAOCULAR RUPTURE.

DR. C. A. ROBERTSON addressed the Society as follows:—I present for your observation a picture cut from

an advertisement representing a cup about to be applied over the eye of a person by the hand, which holds an elastic india-rubber ball. Below you may read the glowing exclamation,—

"RESTORE YOUR SIGHT! Spectacles and surgical operations rendered useless! The inestimable blessing of sight is rendered perpetual by the use of the new patent improved eye-cups."

In displayed type it is announced that—

"Mrs. Rev. Henry Ward Beecher, after using the ivory eye-cups, ordered a pair for the wife of Rev. Charles Beecher, of Georgetown, Massachusetts."

I deem it a duty to utter a warning against the employment of this cupping apparatus, as not only a sheer imposition, since it is false in principle, but as also exceedingly dangerous to the well-being of the eye. It is an old contrivance for the purpose of gain, and is palmed off regardless of the consequences that dupes may suffer. A few years ago an advertisement appeared in the journals to this effect:

"Old Eyes Made New! Send for a pamphlet, price ten cents." The ten cents would bring back a pamphlet containing a description of the cups, stating how the eye flattened by age could be restored to its pristine state, and giving numerous testimonials of their efficacy. Of course these were all false. I was told that these cups were made at a factory at or near Hudson, New York. The pair which I saw were turned out of wood; instead of the single cup and clumsy hollow ball to exhaust the air, represented in our picture, which can cup only one eye at a time, there were two little wooden cups, each furnished with a small piece of india-rubber tubing that connected in a Y-shape with a larger tube. The rejuvenator of his eye was required to place the main tube in his mouth, apply the cups over his senile eyes, and then suck away.

It is hardly necessary in this Society to dwell on the dangerous congestion of the delicate structures of the eye inevitably incident to this dry-cupping operation; to the liability of rupturing delicate blood-vessels within the eyeball, or to mention (all risk being set aside from consideration) that the convexity of the cornea which could be produced must inevitably be very transient, and the reaction to its former shape very rapid. You remember the old Roman proverb, "Drive out nature with a fork, and she will come running back." The idea that the eyeball possesses such plasticity that it could be altered in form by external force being applied, was conceived by Benjamin Franklin. He advised pressure with the thumb and fingers around the eyeball, so as to force the flattened front of the eye or cornea into a greater degree of convexity, and by consequence increase its refractive power and obviate the necessity of spectacles. There were, however, two serious errors in the premises from which Franklin reasoned. One error was the intenable assumption that the cornea can be moulded into convexity so as practically to compensate presbyopia or old-sight; the other was the notion that the sight fails in advancing years from a flattening of the eye.

This latter notion still remains in the popular mind, and it is also generally supposed that near-sightedness is the opposite of old-sight (sometimes called far-sight), and, being due to excess of convexity, that the defect of near-sight will diminish as age advances. Although occupying still a place in text-books of natural philosophy, these notions are to-day demonstrated erroneous.

It has been proved by actual measurement that the cause of near-sightedness is the too great length of the eye from front to back, and a consequent formation of the visual image is front of the retina instead of upon it. In order to throw the image farther back, a concave glass to divide the rays of light is required. This defect is therefore structural or anatomical. Not so, how-

ever, in presbyopia. The sight of those who require spectacles for reading or sewing does not fail for perceiving distant objects. It is only in looking at small objects near by that the necessity for glasses is felt. If the small object is near by, the object refuses to focus or accommodate so as to make an image on the retina as in youth. If it is removed to a greater distance, a very small object will not form in the eye a sufficiently large image to excite visual sensibility. The long-mooted question as to where the power of focusing or accommodating for different distances is situated has been incontrovertibly settled, and it has been conclusively shown that varying degrees of convexity of the crystalline lens, and especially of its anterior face, determine the accommodation.

Helmholtz, by a delicate instrument, measured the image of a candle-light reflected on the front surface of the lens, and found it greater when the eye was regarding distant objects than when regarding near ones. As the size of an image made by a convex mirror is in inverse ratio to the degree of curvature, it follows from the experiment of Helmholtz that the anterior reflecting surface of the crystalline lens is less convex in regarding distant objects than when accommodated for near objects. Helmholtz also found that no change took place in the size of the conical image reflected from the cornea while vision was accommodated, whether for a near or a distant point. When the lens is wanting, no accommodation exists. It has been determined by careful observation of many thousand cases that the power of accommodating for a near point sensibly diminishes from the age of ten years, as the lens becomes firmer, until at about the age of forty it cannot achieve sufficient convexity for accurate definition of fine objects close at hand, and the necessity arises for augmenting the refraction artificially,—in other words, for using convex glasses, the ordinary spectacles of elderly persons.

From these considerations it is clear how radically erroneous is the theory that presbyopia may be cured by modifying the convexity of the eye, or cornea rather; and it is also clear that failing sight is owing to a physiological change or hardening of the lens, which begins at an early age.

I have said that these eye-cups are dangerous, and that warning should be given against their employment. In proof of this I will relate a single case.

Mrs. B., the wife of a wealthy gentleman in a neighboring city, found her sight failing: she did not like to resort to the use of glasses, and, having seen the eye-cups advertised as a sure cure, she tried them. After a short time, the sight of one eye was lost. She therefore consulted an oculist of high repute in another city, who examined her eye with lenses and artificial light and stated to her that she had a cataract.

On her return home I chanced to spend a Sunday with friends in the city where she resided, and her husband requested me to ride out to his residence, and, if possible, to cheer her up. Assuming the diagnosis given as a foregone conclusion, I was a good deal perplexed as to what I should say to do so; but, after having engaged in conversation with her, I requested her to give me the history of her case. She stated that her sight was good until within a few weeks, except that she felt the need of glasses; and she went on to speak of using the eye-cups. One day, she said, a black spot appeared before the right eye, and almost immediately it seemed to shoot out processes like a spider's legs, and her sight was soon gone. This history the gentleman alluded to had not sought before committing himself to the diagnosis of cataract.

I was glad to find in her account of the manner of losing her sight some ground for encouraging and cheering her, without even troubling her to submit to

an examination of the eye, which she seemed to dread lest it should only confirm the opinion already received. I assured her that I was confident that my friend had made a mistake, and that she had no cataract; for her history of the case, and the manner of invasion of her blindness, negatived the probability of it. I gave my opinion that by the use of the dangerous eye-cups she had ruptured a small blood-vessel, and that the appearance of the spider-like spot was due to intraocular hemorrhage, which I believed would be absorbed and her sight restored. I advised her to keep quiet in a shaded apartment, give her eyes absolute functional rest, and throw her eye-cups into the fire. I had the gratification to learn by letter from her husband, within three or four weeks after, that her sight had completely returned.

I regard this as a fortunate escape for her, for it is not always that the effects of intraocular hemorrhage disappear so completely.

CASE OF PNEUMONIA.

Dr. JAMES P. BOYD, Jr., reported the following case: A few months ago a patient was admitted at St. Peter's Hospital, with the following history: Age 26; Irish; laborer; he stated that a few days before coming to the hospital he had a chill, followed by feverishness and loss of appetite. His previous health had been good. On the evening of admission the temperature was 102°, pulse accelerated, respiration normal, and otherwise nothing of interest. A laxative was prescribed, and the ordinary diaphoretic. The second night after admission he became delirious, and was with difficulty kept in his bed. He told the attendants at this time that "his bladder had burst, and that he could not pass his water." Previous to this he had passed his water regularly and without difficulty. A catheter was introduced by the house-physician, and a moderate quantity of highly-colored urine drawn off. Nothing abnormal was discovered in the region of the bladder and urethra. Urine found to contain urates in abundance. On the following morning temperature 104°, pulse 90. His face was now somewhat flushed; pupils normal; delirium continued during the day, but was of a good-natured character. The patient's gait on attempting to walk was unsteady. On the evening of this day the temperature was 105°, pulse was 100. The fourth day after admission the temperature in the morning was 103°; evening, 105°. Fifth day, temperature, morning, 103°; evening, 103.5°. Sixth day, temperature, 103°; evening, 105°. Seventh day, morning, 103°; evening, 104°. Eighth day, morning temperature 104°; evening, 105°. Up to this date the urine had been drawn off regularly; the delirium had continued, although not so marked as at first; the respiration had been easy; the patient had complained of no pain. On entering the ward at this date I observed for the first time that the breathing was hurried, and that the lips were slightly cyanotic. He did not cough. On examining the chest I found slight dulness over lower lobe of right lung, and not very marked dulness over left lung. Crepitant râles were heard on the right side of chest; the chlorides were found to be diminished in quantity in the urine. Ninth day, temperature, morning, 104°; evening, 105°. There was increased dulness over the lower lobes of both lungs; fine crepitant râles over both sides of chest. A herpetic eruption on the lips; increased cyanosis; cough for the first time. Tenth day, temperature, morning, 105°; evening, 105°. Complete dulness over lower two-thirds of both lungs; bronchial breathing; bronchophony; increased vocal fremitus. Twelfth day, temperature, morning, 106°; evening, 107°: this was the highest point reached in the disease. The characteristic rusty sputa of pneumonia were present. From this date the temperature fell, and slowly returned to the normal

standard of health; the bronchial breathing and bronchophony gave place to the râle redux; the dulness gradually disappeared, and the lungs once more were in normal condition. The patient was in the hospital six weeks, and confined to bed four weeks; he was then discharged, cured.

The treatment consisted in the use of the oil-silk jacket, quinine, carb. ammonia, and nourishing diet.

The points of interest in connection with the case are, first, the length of time existing between the chill and first symptoms of trouble in the respiratory apparatus; second, the slowness of the pulse when compared with the high temperature of the disease, to which the German authors call attention; third, the absence of all pain and cough until after the disease had been fully established; fourth, the well-marked stage of delirium.

FALLOPIAN SALPINGITIS.

Dr. JAMES P. BOYD, Jr., also reported the following case, and remarked that the specimen presented was taken from a woman aged 25; married; never had children; had lived fast; died in a fit of intoxication while suffering from Bright's disease. The liver was fatty, and weighed seven pounds; osseous deposits on mitral and aortic valves; membranes of brain thickened and opaque; kidneys enlarged and fatty; mucous membrane of stomach dark red, and congested; evidences of chronic inflammation. External genital organs perfect. Uterus normal in size; virgin cervix; mucous membrane of cervix and fundus in a state of chronic inflammation, and covered with a thick, tenacious substance which on examination is made up of pus-corpuscles, fat, and débris of epithelium. Very slight and beginning cell-proliferations in tissue adjacent to mucous membrane. The Fallopian tubes admit a very fine probe for a distance of about three-fourths of an inch, beyond which point they are impervious. The tubes for the distance of three-fourths of an inch from uterus are straight, and under the microscope present nothing special. The arborescent arrangement of folds of mucous membrane remains, but the epithelium is destroyed, and pus-corpuscles are numerous. About one inch from uterine mouth both tubes are evidently dilated, and terminate in fluid sacs over the ovaries. The fimbriated extremities cannot be recognized. The abdominal extremities of both tubes are bound by firm adhesions to ovaries. The mucous membrane of the dilated tubes is replaced by a smooth, shining membrane consisting mainly of cellular tissue, and covered by some cells of flat form. The remaining coats consist mainly of cellular tissue. Contents of each tube weigh two ounces, and consist of a greenish, gelatinous substance, which, on examination, is found to contain pus, fat, and granular bodies. Ovaries are about normal in size, and on section show numerous small cysts. Both ovaries firmly bound to the tubes.

REVIEWS AND BOOK NOTICES.

STATEMENT OF THE TRUSTEES OF THE PENNSYLVANIA STATE LUNATIC HOSPITAL IN REGARD TO CERTAIN CHARGES OF THE BOARD OF PUBLIC CHARITIES OF PENNSYLVANIA. Harrisburg, 1874.

It is an old saw, that one story is good until another is told, and the present seems an illustration of the wisdom of the saying. In a recent editorial founded upon the "Plea" of the State Board of Public Charities, we cast reflections upon the management of the Harrisburg Asylum, at least so far as concerns the reception of patients. Frightful evil and abuse certainly exist somewhere, and we somewhat hastily, perhaps, as-

sumed that the State Board were correct in laying at least a part of the abuse at the door of our State Asylum. The present pamphlet denies this, setting forth and seemingly establishing the following propositions:

"1. That the Trustees at all times, until the wards of the hospital became crowded, received all patients who were brought to the Hospital.

"2. That when the wards of the Hospital became crowded, the Directors of the Poor of the counties, and the Overseers of the Poor of the townships, were distinctly and uniformly told that any recent cases they might have in charge would be admitted at any time without waiting for the formality of writing, but that, as the law distinctly gave the preference to recent cases, cases of many years' standing could not be received.

"3. That patients have not been sent away by the Trustees 'if not speedily curable,' but, except in certain cases to be mentioned afterwards, were retained as long as the Directors or Overseers could be induced to leave them.

"4. That preference has never been given to paying patients; but they were received with the distinct understanding, expressed in words in the bonds signed by the friends who are responsible for their expenses, that they were to be removed whenever required to do so by the Superintendent.

"5. That of the class of paying patients, a very limited number only could be classed under the term rich; but the great majority either had no means of their own and had to be supported by their friends, or had limited incomes which allowed them only to pay the lowest rate of board, and clothe them, and many could not pay more than the amount charged to the public authorities.

"6. That the Trustees of this Hospital have, year after year, in their published reports, urged the great and pressing necessity of more hospital accommodation for the insane poor of Pennsylvania.

"7. That persons acquitted of crime committed while laboring under mental disorder, and consequently irresponsible, have not been refused admission into the hospital until the wards became crowded, and then only on the provision of the law in regard to recent cases having the preference.

"8. That in the first report of the hospital, as in a great many subsequent reports, the Trustees have urged the establishment of a separate institution for insane criminals, meaning by that term a peculiarly dangerous class of criminals in the jails and penitentiaries; and also that they presented to the Legislature of 1863 a memorial praying for the establishment of such an institution."

We confess this controversy is getting beyond us; and an elaborate investigation of the whole matter is needed,—not to discover who is to blame, for that to the public is of trifling importance, but to get at the best method of reform. The subject is now before the legislature, and we trust that august and most honorable body will give it their best attention, and, having heard all sides and received the views of all who are worthy to be listened to, will come to a wise and righteous decision.

A PRACTICAL TREATISE ON THE DISEASES OF CHILDREN. By J. FORSYTH MEIGS, M.D., and WILLIAM PEPPER, M.D.

Most good scientific books, like human beings, improve for a time after they come upon the stage of action, but sooner or later suffer from the decrepitude of old age and go halting and limping out of sight. The treatise before us is quite an old one, but, owing to the wisdom of its originally sole author in joining to himself some four years ago an associate at that time young in years but rich in lore, and also in leisure,

the book renewed its youth, and started on a fresh career of usefulness. The popularity we predicted for it then has been enjoyed, and in the presence of this verdict we merely say, amen. In the present edition, the articles on diseases of the heart, on progressive muscular sclerosis, on the treatment of scarlet fever and of measles, on variola, and on vaccine disease have been rewritten, and chapters upon pulmonary emphysema, pneumothorax, affections of the tonsils, retro-pharyngeal abscess, malarial fevers, and scrofula have been added. Rendered thus more perfect and exhaustive, the book is still more worthy than before to rank as the most complete treatise upon the subject in the language.

A UNIVERSAL FORMULARY. By R. EGGLEFIELD GRIFFITH. Third Edition; carefully revised and much enlarged by JOHN M. MAISCH. Philadelphia, H. C. Lea, 1874.

This new edition of a well-known book reminds us of the woman in the Scriptures who had suffered many things of many physicians,—each issue of the volume having been superintended by a new editor. The merits and demerits of the work are too well known to need comment from us, and the name of Professor Maisch is sufficient guarantee that so far as concerns pharmacy the edition is well up to date. In looking over that portion of the book which deals with poisoning, we find much that has a "very ancient and fish-like smell."

CLINICAL RESEARCHES IN ELECTRO-SURGERY. By A. D. ROCKWELL, A.M., M.D., and GEORGE M. BEARD, A.M., M.D. New York, William Wood & Co., 1873.

This little brochure of seventy-one pages is chiefly composed of reports of cases in which electrolysis or the galvanic cautery was employed. By surgeons it will be read with pleasure.

GLEANINGS FROM OUR EXCHANGES.

EXAMINATION OF THE BLOOD-GLOBULES IN LEAD-POISONING.—M. Malassez made known to the French Biological Society (December 6, 1873) his conclusions relative to the alterations which take place both in the number and in the size of the red blood-globules, and reported his observations on eleven cases of lead-poisoning.

The normal mean number of red globules, 4,500,000 per cubic millimetre of blood, is reduced to 3,700,000 or to 3,200,000 during the presence of the acute symptoms.

The deficiency in the number of globules is more or less marked, according as the workmen are in a greater or less degree exposed to the lead-dust while practising their trade. In those poisoned the red globules are not only less in number, but they are also increased in size: they present in fact a diameter of the nine or ten thousandth part of a millimetre, seven and eight being the normal average. This increase in the dimensions of each globule is not compensated by the diminution in the number, and renders the circulation difficult in the fine capillaries.

M. Bouchard has estimated the *urochrome* of the urine of those poisoned by lead, and has proved that this coloring-matter is increased in quantity when the acute manifestations, arthritis, colic, and head-symptoms, are present. There must be, therefore, considerable activity in the destruction of the red globules during the acute period of the disease, which shows that hæmatic icterus comes on when the kidneys are not able to eliminate the *urochrome* resulting from this destruction.—*Le Mouvement Médical*.

THE GLANDS OF THE STOMACH.—M. Lépine made the following communication to the Biological Society of Paris at the session of December 6, 1873: The conclusion which M. A. Bernard has drawn from his numerous experiments is that the glands of the stomach are not acid, and that it is only the surface of the mucous membrane which presents reactions of this nature; but some German authors, Heidenheim among others, have made researches upon this subject which have led to contrary results. M. Lépine, however, has re-performed a series of experiments, the results of which verify the conclusions of Bernard. Taking the mucous membrane of the stomachs of dogs killed by section of the medulla oblongata, he has observed that this membrane becomes stained in patches when a solution of ferrocyanide of potassium is applied to one part and some sulphate of the peroxide of iron to another. Prussian blue is formed, but only on the surface of the mucous membrane, and not in the glandular cul-de-sacs.—*Le Mouvement Médical*.

INTRA-VEIN INJECTION OF WATER IN A DOG—DEATH.—M. Laborde presented, at the same session of the Biological Society of Paris, the viscera of a dog into whose veins he had injected, in one hour, a litre and a half of tepid water. Death followed quickly. He found apoplectic lesions and great congestion of the lungs, ecchymosis in the interior of the walls of the left side of the heart, and intense hyperæmia, with tumefaction and a violet coloration of the mucous membrane of the stomach and intestines. M. Laborde reports that during the previous week the dog had taken each day one gramme of sulphocyanide of potassium.

The author has yet to determine the cause of the above alterations.—*Le Mouvement Médical*.

THE INTRA-UTERINE STEM (*The Lancet*, December 27, 1873).—Dr. Routh recommends the use of the intra-uterine stem—1. In cases of *membranous cervix*. 2. In cases of *amenorrhœa* not due to anæmia, but to a stoppage from some other accidental cause. 3. In cases of *dysmenorrhœa*, whether due to mechanical obstruction or to neuralgic trouble. 4. In cases of *uterine flexion*. He believes the necessary conditions in the formation of an intra-uterine stem to be that—1. They should allow an omnilateral movement of the uterus. 2. They should not be longer than two inches, save in exceptional cases, in order that they may not touch the fundus uteri. 3. They should be bicornate superiorly, so as to be retained in utero. 4. Their diameters should not be too small. 5. They should be light, and not easily corroded.

FORMULA FOR INTERTRIGO.—M. Legal recommends the use of subnitrate of bismuth in eruptions caused by scratching, induced in turn by the itching of intertrigo. Glycerin is employed as an excipient, because it does not become rancid, and the tincture of cochineal to give a color. R Subnitrate of bismuth, glycerin, of each eight grammes; tincture of cochineal, twenty drops.—*Boston Medical and Surgical Journal*.

ARTIFICIAL PRODUCTION OF RICKETS AND MOLLITIES OSSIIUM.—C. Heitzman has shown by experiment that mollities ossium and rickets are identical processes, which may be produced artificially in animals by giving them lactic acid. In carnivora, the continued use of lactic acid causes first rickets and then mollities ossium, while in herbivora it produces mollities at once, without rickets.—*London Medical Record*.

FRACTURE OF THE CORACOID PROCESS OF THE SCAPULA, BY MUSCULAR ACTION (*The Lancet*, November 22, 1873).—A miner, æt. 57, slipped on a bank in the act of passing through a wire fence, and in falling his

left arm caught in one of the wires. He instantly felt a severe pain in the fingers, followed by loss of power in the arm and inability to raise the elbow from the side. On examination, it was found that the coracoid process of the left scapula was fractured and drawn downwards. This was treated in the usual way, and resulted in a cure in about two months.

TREATMENT OF TYPHOID FEVER.—The Paris correspondent of the *British Medical Journal* reports a lecture of M. Béhier's upon the diagnosis and treatment of typhoid fever. He urges particularly the use of the thermometer, and asserts that with this instrument alone he can diagnose typhoid fever from any other affection. His treatment consists of hydrotherapy and alcohol, and is, he says, refrigerant in the true sense of the word. He prescribes three baths a day, at a temperature of 68° Fahr., the patient to remain in for fifteen or twenty minutes at a time.

Intestinal perforations, old age, pregnancy, and menstruation, he considers to be contra-indications to the employment of the cold bath, but in every other case he has recourse to this heroic remedy, even in pulmonary complications; and, though he does not look upon it as a specific, he has found it to be almost infallible. As to the use of alcohol, whether as a food or medicine, he believes it to be invaluable in typhoid fever and in all inflammatory affections whether acute or chronic. In typhoid fever he prescribes eighty grammes (about two and a half ounces) of brandy daily, with an equal quantity of water, administered in divided doses.

Professor Sée is not so enthusiastic as to the curative powers of cold baths and alcohol in typhoid fever. He contents himself with an occasional bath or sponging the body with vinegar and water, and, instead of brandy, he prescribes wine and water, administering at the same time small and repeated doses of quinia.

LIGATURE OF THE DUCTUS CHOLEDOCHUS (*Le Progrès Médical*, December 20, 1873).—M. Odige tied the ductus communis choledochus in a dog, which survived the operation for fifteen days. A very few hours after the ligation he was able to recognize the presence of bile in the urine, thus apparently invalidating the statement of Frerichs, that coloring-matters could not be found in the renal secretion for thirty or forty hours. He believes the latter author could not have tied all the biliary ducts. He found that no discoloration of the skin was manifest until later.

GALVANIZATION OF THE SYMPATHETICS (*Le Progrès Médical*, December 27, 1873).—M. Onimus has found, by ophthalmoscopic examination, that the vessels around the pupil dilate during electrization of the superior cervical ganglia, and the circulation becomes more active when the electrodes are placed on the skin about on the level of the latter. He has applied this observation therapeutically, and in three advanced cases of atrophy of the optic nerve he has galvanized these ganglia. Although the treatment did not produce a complete cure, he obtained a marked amelioration, probably attributable to the influence of the electrization upon the activity of the retinal circulation.

ALLEGED CURE OF LEPROSY.—The *Friend of India* reports that the Madras surgeon in medical charge of the penal settlement at Fort Blair believes he has made a valuable discovery in the cure of leprosy. He is of opinion that leprosy can be cured by the oil of the gurjun-tree. Every leper in the settlement is, it is stated, being cured fast of this loathsome disease. In no case has there been the slightest failure, and the disease has been arrested at every stage.—*Druggist's Circular*.

MISCELLANY.

HORNET-STING.—In addition to the local irritation produced by the stings of bees, hornets, and wasps, severe and even fatal results are sometimes known to ensue. In a case observed by Dr. R. M. Cooper, a lady, having accidentally approached a hornets' nest, was stung six times upon the crown of the head, through a sun-bonnet, and four times on the back of the neck. She suffered severely at the time from the stings, and was found by the physician, an hour afterwards, in a cold, collapsed state, with pulse thread-like and almost imperceptible. Though her condition appeared at first to be a critical one, under the influence of active stimulants she eventually rallied. Upon the following day an intense itching was experienced over her whole body, which was found to be the seat of an erythematous eruption. This eruption disappeared at the end of thirty-six hours.—*Transactions of New Jersey Medical Society.*

REVOLT OF LUNATICS.—A revolt occurred a few days ago in the lunatic-asylum of St. Andrew's, near St. Petersburg. While the keepers were at dinner the patients burst into a room where some arms were stored, and, having distributed them, prepared for resistance. The wardens endeavored to calm them by argument, but ineffectually, and some of the keepers, having approached too near, were seized and attacked with sword-cuts. Five were killed and two seriously wounded. Recourse was then had to famine; but forty-eight hours' fast was endured before the madmen laid down their arms. Six of the most furious have been placed in separate cells, with strait waistcoats on them.—*Recent paper.*

"THE noisy and pretentious form of medical superstition which was introduced by Hahnemann is passing to decay through the customary intermediate stage of a dying delusion,—the stage of fraud."—*British Medical Journal.*

NOTES AND QUERIES.

TO THE EDITOR OF THE PHILADELPHIA MEDICAL TIMES:

SIR,—I have been a reader of the *Times* for over a year, now, and can say for it that it is the best medical journal published, as I have been a reader of almost all American, also some English and German journals, but none come up to the *Times* for variety of medical news. The report of thirty cases of chorea in the number for January 3, 1874, made me think of reporting ten cases that I have treated during fifteen years. Of these, eight were females, and two males; the oldest 14, and the youngest 7. Most of them were treated with strychnia and iron, and some with arsenic and iron; zinc I have never used; in one case ether spray to the spine acted like a charm. This was a bad case, and in two weeks after using the spray all movements and jerking of the limbs had ended, although it had lasted for more than six months before treatment. All ten cases were cured, and are now all hale and in good health.

Carbolic acid I have used for the last five years in tinea sycosis and found it efficient. I have under treatment now two cases; one is well, the other is undergoing a treatment of hyd. chlor. corros. and mur. ammoniac in water, after first removing the hair. I have been treating typhoid fever after the mode of Prof. Binz, by giving large doses of quinia and whisky, and also other stimulants, with good success. Of five cases thus treated this winter, all recovered. The ages of the five cases were from 17 to 14 years;

the duration of the fever was from sixteen to twenty-one days. All of the cases are now in a better state of health than before the disease.

In one case of gunshot wound of the arm, some years ago, I gave brandy, one quart a day, for at least four weeks, with good diet, and if it had not been for the alcohol the patient would have died; for so soon as the brandy was omitted for a few hours he began to fail, and the temperature began to rise from 97° or 98° to 100° and 103°.

I have the honor to remain truly yours,

C. H. SMITH.

KENTON, OHIO, January 14, 1874.

TO THE EDITOR OF THE PHILADELPHIA MEDICAL TIMES:

DEAR SIR,—I have just read with great interest Dr. Clarke's little book on "Sex in Education;" and, while fully appreciating the value and excellence of the work, I feel constrained to protest against its extreme "plainness of speech." Dr. Clarke could have made himself equally well understood without being so coarse as he is in many instances.

I can hardly imagine Dr. Clarke's talking to the New England Women's Club about "hermaphroditic spinsterism" or the "castration of femininity;" by the by, if he is writing English, why doesn't he say the "spaying of femininity"? The introduction of the subject of eunuchs is quite unnecessary, having, it seems to me, no bearing on the question. Moreover, Dr. Clarke is not correct when he says, "Except the Secretary of the Treasury in the Cabinet of Candace, Queen of Ethiopia, who was baptized while journeying, by Philip the deacon, none of that class (eunuchs) have made any impression in the world's life that history has recorded." The *Encyclopædia Britannica*, in the article on Eunuchs, says, "The vulgar notion that eunuchs are necessarily deficient in courage and in intellectual vigor is amply refuted by history. Narses, the famous general under Justinian, was an Eunuch. Such, also, was Herminias, Governor of Atarimea, in Mysia, to whose manes the great Aristotle offered sacrifices." Origen, the celebrated Christian teacher and scholar, who was born in the second century, castrated himself early in life. In a little volume called "Eunuchism Displayed," published in London in 1740, the writer relates numerous other instances of the capacity of eunuchs and their power in the courts of the Eastern kings and later Roman emperors; but it is hardly worth while to repeat them, as many are well known.

Yours, truly,

W.



COMPANION TO THE FAMILY MEDICINE-CHEST.

Moral.—Send for the doctor.

OFFICIAL LIST

OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U.S. ARMY, FROM FEBRUARY 3, 1874, TO FEBRUARY 9, 1874, INCLUSIVE.

WIRTZ, H. R., SURGEON.—Died at San Francisco, California, on January 24, 1874.

PHILADELPHIA MEDICAL TIMES.

THURSDAY, FEBRUARY 19, 1874.

PHONOGRAPHIC REPORT.

THE SIAMESE TWINS AT THE COLLEGE OF PHYSICIANS.

A SPECIAL meeting of the College of Physicians of Philadelphia was held at the hall, Wednesday evening, February 18, for the purpose of hearing the report of the Commission on the Siamese Twins,—Dr. W. S. W. Ruschenberger, U.S.N., in the chair. On motion of Dr. Gross, it was, after some discussion, resolved that the *Philadelphia Medical Times* be allowed to report the proceedings of the meeting, on condition that three hundred copies of the journal should be given to the college for the use of the members.

The bodies of the Siamese Twins being upon the table, the meeting proceeded to hear the report of Drs. Pancoast and Allen. On behalf of the Commission, Dr. Pancoast stated that, the dissection not having been entirely completed, their report would be a verbal one, to be followed at some later date by a memoir upon the subject. He further remarked that it had been agreed that he should consider chiefly the surgical aspect of the matter in hand, whilst to his colleague had been assigned the demonstration of the anatomical peculiarities.

DR. WILLIAM H. PANCOAST:

Mr. Chairman, and Fellows of the College:— Having been requested, as a member of the Commission, to open the discussion this evening, I will say briefly, in reference to this monster of a symmetrical duplex development, joined, as many of the Fellows now know, at the ensiform appendix and also here at the omphalos or navel, that at the investigation which we made on the first occasion at Mount Airy I made the opening incision of the body on the line for the ligation of the primitive iliac, on the right side; Dr. Allen made the incision on the left. The object was to reach the great vessels,—the aorta and two primitive iliacs,—and to force the injecting material which we used for embalming (chloride of zinc) up the aorta and down the iliacs until it ran from the incisions made in the fingers and toes. It flowed freely through the blood-vessels in Eng, owing to the ossified condition of his arteries; the injection in Chang was, however, not so successful, owing to decomposition in the tissues and blood-vessels. It was necessary to repeat the injecting process several times in order to preserve the body. The arteries of Chang were found to be very much decomposed,—quite rotten, in fact.

In Dunglison's Medical Dictionary we find the scientific name given for the Siamese Twins, in the classification of teratology, to be *Xiphopages*; and by referring to the admirable article on Diplo-teratology of Dr. G. J. Fisher (published in the Transactions of the Medical Society of the State of

New York for the year 1866), it will be found that the twins belong in the class of *Anacatadidyma*. In his classification of double monsters he makes three orders: *Order first*,—*Teratacatadidyma*; derived from *τέρας*, *τέρας*, a "monster," *κατά*, "down," and *δίδυμος*, a "twin." *Definition*,—duplicity, with more or less separation, of the cerebro-spinal axis, from above downwards. *Order second*,—*Terata-anadidyma*, derived from *ανά*, "up" or "above," and *δίδυμος*, a "twin." *Definition*,—duplicity, with more or less separation, of the cerebro-spinal axis, from below upwards, or from the caudal towards the cephalic extremity of the neural axis. *Order third*,—*Terata-anacatadidyma*, derived from *ανά*, "above," *κατά*, "down," and *δίδυμος*, a "twin." *Definition*,—duplicity, with more or less separation, of both the cephalic and the caudal extremity of the cerebro-spinal axis, existing contemporaneously. In this order, the monster now before us might be called an *Omphelopus Xiphodidymus*.

Thus we have the scientific nomenclature of this monster. Of course, the consideration of greatest interest to the profession, and one of the main reasons why the Commission made such exertions to obtain this post-mortem, was that the American profession might not be charged with having neglected an effort to obtain an autopsy, which would solve the mystery of their union. The feature of greatest interest is connected with this band,—about four inches long and eight inches in circumference. In addition to this, there are other points of importance in teratology, in regard to the fulfilment of the law of homologous union, in relation to the juncture of the recti muscles and the fasciæ of the obliquus and transversalis at their point of meeting in the centre of the band. In regard to the position of the hearts, we think their apices present towards each other; but we have not yet opened the thorax. The livers we have found to approximate to each other and to push through the respective peritoneal openings into the band. We extended our incisions to the margin of the band in front. By placing my hand in the peritoneal cavity of Eng and my colleague placing his hand in the peritoneal cavity of Chang, we pushed before us processes of peritoneum, which ran on to the median line of the band; and we could feel our fingers in the lower portion of the band, behind the median line, with a distinct layer of peritoneum between them, demonstrating at once the prolongation of the peritoneum into the band, and the complete separation of one peritoneal cavity from the other at this median line. Above that we felt some traces of vascular connection, apparently running from one liver to the other; but this we will examine into when we have a better opportunity of carefully dissecting and examining what vascular structures may exist. We also noticed that in turning off the flaps consisting of the anterior walls of the abdomen, the hypogastric arteries, as illustrated by the diagram on the blackboard, ran upwards in each body into the band. We lost them in this way, as we

think, towards the common umbilicus in the anterior inferior surface of the middle of the band.

It is probable that the two hypogastric arteries on each side passed through this umbilicus. Whether or not there were two umbilical veins, we have not yet been able to decide, nor to answer the question whether the umbilical cord was double or single and composed of the four hypogastric arteries and two umbilical veins, or whether the placenta was single, double, or twin.

We also recognized that the ensiform appendix, as shown in the diagram of each side, was prolonged and united in the middle line. On our later examination, we find that there is complete continuity of structure of the cartilages, but no true joint at the middle line, although it is possible there may be some small synovial sacs farther up. The motion is mainly due, as I here demonstrate to you by moving these bodies one upon the other, to the elasticity of the connected ensiform appendices and intervening fibro-cartilages.

In regard to the vascular connection of the band, we have not yet been able to make so thorough and careful an examination as we wished; but still, in throwing colored plaster into the portal circulation of Chang it has been found to flow through the vessels of the upper part of the band into the portal vessels of Eng. So that the surgical anatomy of the band consists in the skin and fascia which cover it, the two separate peritoneal pouches which meet in the middle, the large peritoneal pouch, the vascular connection, to whatever extent that may exist between the two portal circulations, and the remains of the hypogastric arteries in the lower portion of the band. Thus the main difficulty in any operation for section of the band would seem to be in regard to the peritoneal processes and the portal circulation. The anastomosis which may exist between the internal mammary arteries and the intercostals in the integument in the upper portion of the band, of course would present no difficulty.

I will not venture upon any further remarks as to the surgery of the case, while there are so many distinguished gentlemen present more competent than myself to give an opinion. At the same time, operations on the peritoneum may not be considered so hazardous in this day, when ovariectomy, gastrotomy, and even Cæsarian section, are so often performed. The peritoneum-pouches themselves would not present so great a difficulty as might be anticipated, under pressure and acupuncture, by which the sensitiveness of the structure might be so altered as to permit of a section. I was informed at Mount Airy that in Paris a surgeon had made the experiment of applying pressure upon the band, and it was reported the twins had fainted in consequence. I could not ascertain, however, whether this was from fright, design, or actual pain.

As Dr. Hollingsworth is present, it may be proper for me to mention a fact which that gentleman can corroborate, that Eng was the stronger physically and Chang was the stronger mentally. The same difference was observable in their characters. Chang was more irritable than Eng, especially since an attack of paralysis with which he had been afflicted,

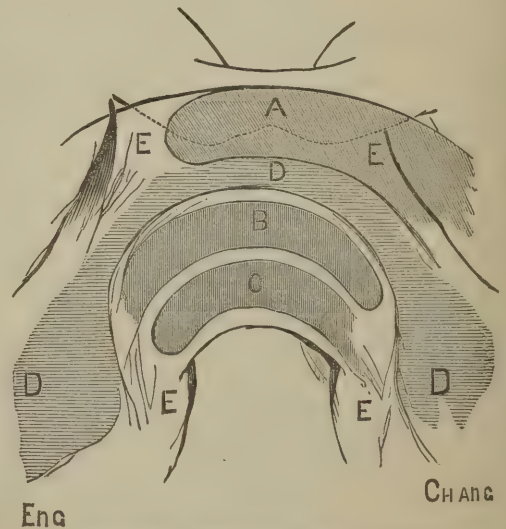
—this being in the side next to Eng. The latter had not only to bear with the irritability of his associate, but also to support one-half his weight. Among other peculiarities, Chang would sometimes break useful articles or throw them in the fire.

In conclusion, let me say that when I turned up the skin and superficial fascia of the H incision on the posterior part of the band, I was struck with the development and the strength of the abdominal aponeuroses. The fibres arched, interlaced, and developed into a strong fibrous band about a quarter of an inch wide, running around the median line, although there was no actual joint in the cartilage.

Prof. HARRISON ALLEN:

Mr. Chairman: I will probably best discharge the duty devolving upon me by at once proceeding to a somewhat more minute anatomical description than Dr. Pancoast has given, this being in accordance with the understanding between us in reference to the evening's exercises.

Perhaps it would be best to point to that simple diagram upon the blackboard before considering the subject more fully in detail. As Dr. Pancoast has informed the Fellows, there is a union of the twins at the two ensiform cartilages, which are very firmly joined in the centre, Eng's process being the more robust of the two. You will observe that there is a point of conjunction between the two processes which is not quite in the median line of the band. In the centre of the band is seen an elliptical space which suggests to the observer the presence of a synovial cavity. It is probable that the ensiform junction is of the character of a synchondrosis, with a median bursa-like sac; neither ensiform cartilage is ossified.



DIAGRAMMATIC REPRESENTATION OF THE BAND.

- A, upper or hepatic pouch of Chang.
- E, E (dotted line), union of the ensiform cartilages.
- D, connecting liver band, or the "tract of portal continuity."
- B, the peritoneal pouch of Eng.
- C, the lower peritoneal pouch of Chang.
- E, E, lower border of the band.

Below this point, in the diagram, you see a number of differently-lined tracks. The lower one (C),

immediately above the umbilicus, is only separated from the skin by a very delicate layer of tissue (so that, with the finger introduced into the pouch and moved, there is a decided indication of motion in the skin) on the under surface (E, E) of the band.

This pouch passes across the band from the abdomen of Chang, and is lost in the duplicature of the suspensory ligament of the liver of Eng. The finger passed upward to the band from the abdomen of Eng crosses the band above the pouch just mentioned, and is lost between the layers of the suspensory ligament of the liver of Chang. When the significance of the round ligament at the free border of the suspensory ligament is remembered, the relations of these pouches directly suggest that they have had essential bearings to the umbilical vein of the funis, and may be provisionally termed the *umbilical pouches*.

Above Eng's pouch (B), and between it and the under surface of the ensiform conjunction, is a second pouch (A) prolonged from Chang's abdomen, which fairly reaches the peritoneal cavity of Eng, but is not continuous with it. Extending up into this pouch from Chang's abdomen is a process which suggested to the Commission the possibility of the transit of hepatic vessels. This view was rendered more probable from the fact that a similar process passed up into the band from the liver of Eng. Accordingly, the plaster injection, colored by ultramarine, was thrown into a tributary of the portal vein of Chang, when it was observed that the fluid passed freely into the liver of Eng, as well as into some of the mesenteric veins proper. It is my own hypothesis that this bond of union (D) was the true hepatic tract; but in its present state, in the absence of evidence of any parenchymatous admixture about the vessels thus crossing the band, we prefer to denominate the transit as the *tract of portal continuity*.

In the foetal condition it is very likely that this large space (A), the upper pouch, now continuous with the abdomen of Chang only, was entirely occupied by true liver-tissue, which, as maturity was attained, became smaller, and left an empty space. Hence I propose to call this upper pouch the *hepatic pouch*. The contraction chanced to be greater on Chang's side, in harmony, it may be, with other evidences of a weaker and less developed type, which is so apparent in many of the tissues of Chang. Now, with reference to the demonstration. As Dr. Pancoast has already informed you, the incisions in the abdomen were made in rather an exceptional manner. By reference to the parts it will be seen that the incision in either individual was located in such a way as to avoid the median line, since it was supposed from the peculiar position of the umbilicus that the remains of the hypogastric arteries would be found extending from the fundus of the bladder upward and inward along the entire length of the anterior wall of the abdomen. Besides, this incision would enable us, by continuing from below upward, to fairly open the abdomen and examine the cord, without violating the conditions by which the Commission was bound. The flap comprises the greater part of the abdominal wall, and can be best observed,

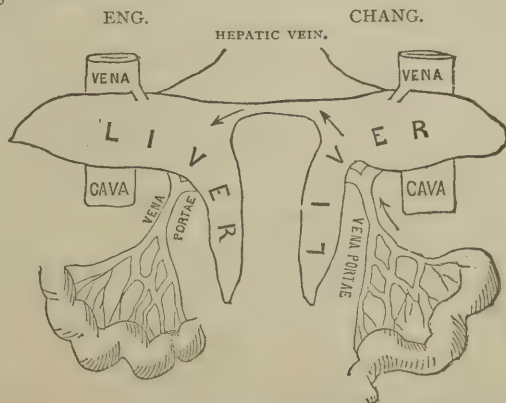
from the position of the bodies on the table, in that of Eng.

You notice that the tissues are well supplied with fat; and this condition is very plainly in contrast with that of Chang. Eng's side of the band is well nourished; Chang's end of the band presents an entirely different aspect. Chang was an invalid, and the weaker half of this organism, with less strength in the abdominal walls, and in every way less tissue, than was possessed by Eng. You can mark that distinction very plainly in the two halves of the band, proving, if we had no other means of proof, that there could not be any very intimate communication of the vessels between the two.

The first point worthy of notice is that of an isolated mass of adipose tissue, evidently sub-peritoneal, which is in the position of the usual umbilicus, namely, in the median line of the abdomen, about half-way up the anterior wall. This is strictly symmetrical, a similar point of about the same size being found in Chang.

Another fact equally well pronounced is that in Chang the bladder was found very much contracted and contained no urine; it was deep down in the cavity of the true pelvis. That of Eng, however, was distended with urine: hence there was a contrast in the appearance of the umbilical fold in the two individuals, in consequence of the great difference in the actual size of the bladders.

My finger is now in the *umbilical pouch* of Chang (c). The motion is noticeable in the under surface of the band. On the side of Eng no such motion will be observed. I can very clearly see my finger passing between the two folds of the suspensory ligament. At this point it would perhaps be well to exhibit the drawings which have been made of the views which we have been able to obtain from this very limited incision. On looking up towards the band with the greatest possible stretch of tissue, we see the arrangement of the remains of the hypogastric arteries converging towards the bond of union. In this lower diagram we show you the livers joined by what is supposed to be the *tract of portal continuity*. You will observe the limits are somewhat symmetrical. Here is the liver of Chang, with a foreshortened right lobe.



DIAGRAMMATIC REPRESENTATION OF THE LIVERS; PORTRAYING THE RELATIONS OF THE VESSELS, ETC.

The arrows show the directions in which the injection passed from Chang to Eng.

The remainder of the right lobe is deep within the abdomen, and of course it has not been seen. Here is the fundus of the gall-bladder, and there the suspensory ligament, carrying the remains of the umbilical vein. When the finger is passed from Chang into Eng, it is received between the folds of the suspensory ligament of Eng. In Eng, the parts are essentially the same, although you see more evidence of adipose tissue. Here is a little ligament aiding in the support of the liver, to whose convexity it is attached; it is not seen in Chang at all. You might term it an accessory suspensory ligament. When the finger is introduced behind the pouch, it is observed to terminate blindly, showing, we think, that it is adventitious, due to the presence of that suspensory ligament.

We find some vessels of the portal system, even as far down as the mesentery, well filled with the blue coloring-matter. We of course desired, as far as possible, to examine all the tissues here by these incisions: hence it was that when the bodies were in this position the skin was taken off from the wall in order to get a view of the linea alba.

[The bodies were here inspected by the audience, and afterwards turned so as to expose the posterior part of the band. Further remarks apply to this posterior aspect.]

Dr. PANCOAST: While the bodies are being turned, I will take the opportunity of replying to one or two questions which have been asked me. First, in regard to the common sensibility of these individuals. According to the statements we received at Mount Airy, there was a line of common sensibility corresponding to the median line of the band. Dr. Hollingsworth says that if a pin were stuck into the band at the median line, both of the twins would feel it distinctly; but that, even at a slight distance to either side, the point of the pin produced an effect only on the twin of that side.

Another question has been asked me, as to whether either of them was ever put separately under the influence of an anæsthetic. I answer it by saying that so far as we know it never was attempted, but that when, upon the final occasion, Chang was anæsthetized by death, Eng was for a time unaffected. The story as told us at Mount Airy was that Eng waked up and asked his son, "How is your Uncle Chang?" The boy said, "Uncle Chang is cold—Uncle Chang is dead." Then great excitement took place. Eng commenced crying out immediately,—saying to his wife, whom they called in, "My last hour is come," and finally sank away. He was in perfect health when they went to bed.

They had been sitting up in a large double chair, made for their accommodation. Eng was smoking his pipe, until he became sleepy, and finally said to Chang, "We must retire." Chang said that he could not lie down comfortably. I understand that when they went from Chang's house to Eng's house [see editorial], where they died, it was against the direction of Dr. Hollingsworth; but with their usual stubbornness they persisted in riding the distance in an open buggy. To return to the narrative of the night of their death, after Chang had refused to

lie down, they walked about the house for some time, and even went out to the porch, and washed their hands and drank some water. It was about one o'clock when they went to bed. Then Chang died, some time between that and morning; his death not producing any immediate impression on Eng. It was only when the latter woke up and inquired about the condition of his brother, that he was at all affected.

As to the question, "What caused Eng's death?" I am not able to tell. The post-mortem which has been made does not show the condition of his lungs. Probably the valves of his heart were in a disorganized condition, and probably also the shock upon that weakened organ caused death.

Dr. ALLEN: In my opinion, Chang died of a cerebral clot. From inquiry at his home, I was led to believe that the lung-symptoms were not due to pneumonia; indeed, were not severe enough to have been so caused. The suddenness of the death, the general atheroma of the arteries, and the fact that there had been previously an attack of cerebral paralysis, all indicated that the death was of cerebral origin. Eng probably died of fright, as the distended bladder seemed to point to a profound emotional disturbance of the nervous system, the mind remaining clear until stupor came on,—a stupor which was probably syncopal. One thing to be settled in the making of our examination was to get the bodies in the best possible position, so that we could judge of the true nature of the band.

You will observe the great contrast between the anterior appearance of the band and its posterior aspect. When we suspended them face to face we conceived we had them in the proper position for study. On the posterior side there was a fold underneath the skin extending from the ensiform cartilage of Chang, passing over, crossing the median line, and inserted into the ensiform cartilage of the opposite twin, Eng. It was one of the objects of the examination to determine what was the nature of this fold. I judge it to be the linea alba; but I leave the Fellows to decide that for themselves. I will also add that, because we had not the privilege of cutting the anterior portion of the band, we were obliged to cut down from the point of which I have spoken to get to the structure, and demonstrate these *culs-de-sac* from behind.

Here (referring to the casts), from this point the incision is horizontal about midway, and joined laterally by two oblique lines which were directed one upward and the other downward and outward, making a modified letter-H incision. Thus we got all the space we needed. When I raise the skin, we see the scar of the umbilicus in the superficial fascia; and on lifting the other flap we get a better general demonstration.

And now we come upon the point of interest, namely, the position of the band and its true nature. We have a diagram here. You notice on Chang's side that there is an arrangement of interlacing aponeurotic fibres, marked here; and these fibres, starting in Chang, pass across the median line and are inserted into the ensiform cartilage of Eng.

Turning the lower flap downward, the upper flap upward, and the two lateral tongues outward, the superficial fascia is exposed. This is abundantly supplied with adipose tissue on either side, but is free from fat where it covered the band. Both the lower flap and the fascia are lost in the scar marking the position of the umbilicus. The same dissection exhibits the position of the lower pouch of Chang. Turning down the external oblique, the two recti, and the internal oblique muscles, the transversalis was exposed, the latter forming a very well-defined layer in Eng, with an interval between the ensiform cartilage and the inferior margin of the thorax. These were much less marked in Chang.

Turning forward this layer of fibres in Eng from without inward, the diaphragm is brought into view. Muscular fibres are conspicuous in this position. The peritoneum on either side is now fairly exposed. Incisions may now be made with a view of demonstrating the pouches of the band. The upper pouch of Chang is, you will observe, freely opened on its posterior aspect, and the vessels in the tract of portal continuity are seen to be well distended with the injecting fluid. A small artery is seen crossing beneath this tract of veins, and is probably a branch of the hepatic; but, whatever may be its origin, it evidently could have little effect in influencing the nutrition of parts beyond the band, and is probably retained within the band itself. The lower pouch of Chang reveals nothing which was not demonstrable from in front, and the same may be said of the single pouch of Eng; thus confirming our opinions of the construction of the band before the pouches had been opened from behind.

Dr. ABRAHAM JACOBI, of New York, being called upon, said: I am very much obliged to the gentleman who has mentioned my name. I do not believe, Mr. Chairman, that I have anything to add to the stock of knowledge in regard to the subject before us. If I were to answer the question as to how this monstrosity originated, especially whether they became connected after having been separate organisms, I should say that that idea has been given up by those whose opinions are entitled to weight. It is true that years ago such specimens were spoken of by Dalton in Holland; and a number of others have alluded to the idea that two such individuals might in embryonic life become united simply by adhesion, the result of their being located together in the embryo. In truth, it appears to me that at that period such a thing might be possible; but of course the union would be a superficial one, not involving the deep organs.

We know that the first epidermis is formed about the end of the fifth week of embryonic life, and that after a time it is thrown off, so that the embryo of about seven or eight weeks is more loosely covered with the real epidermis than in the earlier period. The epidermis is thrown off a number of times until about the fourth month of utero-gestation, when it is finally perfected and remains intact. Now it is suggested that at those times when the epidermis is thrown off the connection takes place between the two individuals,—just as the connection takes place between the prepuce and glans, which we so

often find adherent in the fœtus and in a number of new-born children.

There are evidences, which we cannot forget, that such connections have taken place before the final epidermis is formed, and about the time one of the earlier coverings is being thrown off, at a period when the internal organs, frequently implicated in such monstrosities, are already formed. There are few double monstrosities so well developed as this one. I think the records of about four hundred monsters have now been collected in the books and journals; but very few are of such a complete nature as this. Every one has heard of the Hungarian Twins, who lived to the age of twenty-one years, in the last century. Another pair of female twins, that travelled in Germany about two years ago, were described at the time, in the *Berliner Wochenschrift*. They were of a similar nature. There are two cases on record in which a division has been successfully attempted, but in those cases the connections were not so well developed as in the Siamese Twins. The connection was in the same neighborhood, but was only superficial,—of skin and subcutaneous tissue. One of the cases is recorded by Dr. Braun (*Virchow's Archiv*). Fortunately, or unfortunately, I do not know which, they were his own children. They were of the female sex. He separated them immediately after birth. One lived three and a half days; and when the case was described in 1866, the other was five years old. In that instance the connection—three and a half inches long—extended from the ensiform process to the umbilicus. The other case is described as early as 1689, by the old German author Kernoch.

As far as the origin of twin monsters is concerned, I am certainly of those who are not of the opinion that two individuals could get into such an intimate connection by growing together. Certainly the connection is an original one. I believe that the general opinion is now that one Graafian vesicle may have two ova, or one ovum have two nuclei; and these finally may, like the two vitelli of an egg, be closed together, surrounded by the same material, forming a single complete ovum; and thus it may be that the two are included in the same ovum. I think that this will explain also why the sex is always the same,—why they are always both male or both female. They are male in twenty or twenty-five per cent. of the cases.

Dr. H. C. Wood here asked Dr. Jacobi a question in regard to the Biddenden Sisters [an account of whom will be found in another column of this journal], as to whether they had been reported in the works on monstrosities.

Dr. JACOBI. I do not know anything about that.

Dr. PANCOAST stated that an account of those sisters was contained in a semi-popular book entitled "*Lexicon Tetraglotton*," published by Samuel Thomson, London, 1660.*

* The Editor of the *Times* is indebted to Dr. Pancoast for an opportunity of inspecting the work. The account of the Biddenden Maids is precisely that contained in the circular printed in another column, though in a somewhat different shape. The account is in a single sheet, and is evidently not a part of the original book, but has been pasted in it. In appearance it equals the body of the work in age, as shown by the color and condition of the paper; but of course it is impossible to decide with any accuracy when it was put in the book.

None of the Fellows desiring to say anything further upon the subject, on motion, the College adjourned.

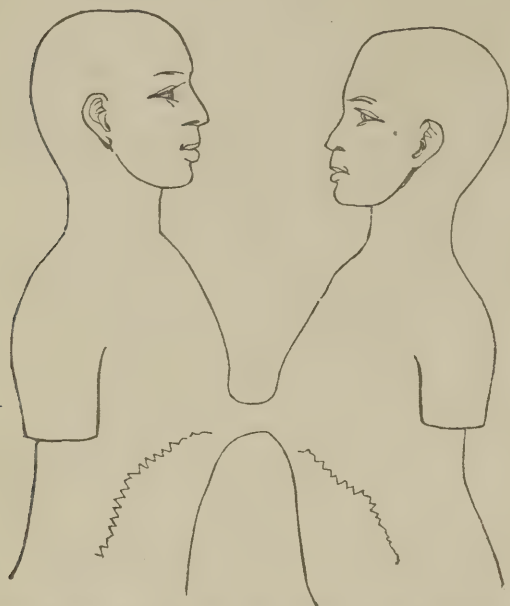


DIAGRAM FROM A CAST SHOWING THE POSITION OF THE LIGAMENT, AND OF THE PRIMARY ANTERIOR INCISIONS.

During life the twins never assumed the face-to-face position in which they are here represented, and which is without doubt that of their fetal life.

STATEMENT.

Statement of Eng's widow, made to the Commission at Mount Airy.—The paralytic stroke from which Chang had suffered occurred about three years ago, when he was at sea, seven days out from Liverpool. He had been intemperate for some time previously, and had been drinking hard on board the vessel, being frequently intoxicated. He had never had mania à potu. Even when he was drunk, Eng was not affected. Two of his children had died; one from phthisis, the other apparently from apoplexy. Eng had lost five children: one each from phthisis, diphtheria, and dysentery, one from the effects of a burn, and one still-born.

Chang died Saturday, January 17. He had had a cough since the preceding Monday night. It was dry, with scanty, frothy sputum and no pain. Left lung probably involved; slight dulness on corresponding side. On Thursday, January 15, his skin was acting freely, and for that reason Dr. Hollingsworth ordered him not to venture out; but, in spite of that prohibition, he went as usual to Eng's. At the time of his arrival he had little cough and no expectoration, but loud bronchial râles were plainly heard by those around him.

When Eng saw his wife after learning that Chang was dead, he said, "I am dying," but did not speak of his brother's death. He soon afterwards expressed a desire to defecate, and this continued

for half an hour. He rubbed his upper extremities, raised them restlessly, and complained of a choking sensation. The only notice he took of Chang was to move him nearer. His last words were, "May the Lord have mercy on my soul!"

TRANSLATIONS.

CHLORAL AS AN ANTISEPTIC.

DUJARDIN BEAUMETZ and Hine state (*L'Union Méd.*, 1873, Nos. 62 and 63) that if pure albumen, muscular tissue, or urine is mixed with a solution of hydrate of chloral of the strength of at least one per cent., and placed under conditions favorable to putrefaction or fermentation, neither of these changes takes place.

They think that they have further established that this property of the solution named is due neither to the development of chlorine nor of hydrochloric acid. They made use of a similar solution as an external application, and also as an injection in various affections. They think that it had a favorable influence upon gangrenous sores, phagedenic chancres, and ulcers which had a tendency to spread into surrounding tissues. For cancerous ulcerations a somewhat stronger solution was employed: two per cent., and even more.

They recommend the use of the same solution for the injection of serous cavities,—*e. g.*, the chest in cases of pleurisy with a secretion of pus,—and also for use in affections of the bladder attended with decomposition of the urine.

HEMICRANIA CURED BY LOCAL DEPLETION.

DR. HAMON (*Bulletin de Thérapeutique*) gives an account of a case of right hemicrania occurring in his practice, which was successfully treated under the following circumstances:

The patient, a gentleman thirty-five years of age, and enjoying good general health, had been suffering for some eight months with frequently-recurring neuralgic attacks.

For some time these attacks were kept under control by subcutaneous injections of chlorohydrate of morphia ($\frac{1}{4}$ th grain); but this agent finally seemed to lose its power, and, even when combined with valerianate and sulphate of quinia and administered by the mouth, failed to give relief. Dr. Hamon then had recourse to local depletion. Some five ounces of blood were abstracted from the patient's right malar region by means of the mechanical leech. The improvement in the neuralgic symptoms was immediate and complete; the pain disappeared, and after the lapse of some months had not returned.

WILLIAM ASHBRIDGE, M.D.

TEMPORARY ALBUMINURIA THE RESULT OF COLD BATHING (*The Lancet*, December 6, 1873).—Dr. George Johnson reports four cases in which, after protracted cold baths, albumen appeared in the urine for periods varying from a few hours to several weeks. The albuminuria was probably caused by repeated and prolonged immersion in cold water, which, by repressing the cutaneous secretion, may possibly lead to permanent mischief and to structural degeneration of the kidney.

PHILADELPHIA MEDICAL TIMES.

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THURSDAY, FEBRUARY 19, 1874.

EDITORIAL.

CHANG AND ENG.

IN the present article it is not purposed to give an elaborate history of these famous twins, but only to put on record certain well-ascertained facts of physiological interest in regard to their life, to give all that can be ascertained as to the circumstances of their death, and to offer a brief history of the manner in which their bodies were brought to Philadelphia.

Chang and Eng Bunker were born in Siam, in the year 1811, but lived for many years in North Carolina, where they were married, and raised large families of children, Chang being the father of ten, Eng of nine. Dr. Joseph Hollingsworth, to whom we are indebted for the information given in this article as to their habits of life and the circumstances of their death, states that he has known them as residents in the neighborhood of Mount Airy, North Carolina, for some twenty years, during which time he has acted as their family physician. Chang, who is said to have derived his name from the Siamese word for "left," was the left of the pair, and was much smaller and more feeble than his brother Eng, whose name signifies "right." Their habits were very active: during the latter part of their life they and their families lived in two houses, about a mile and a half apart, and it was an inflexible rule that they should pass three days alternately at each house. So determinedly was this alternation maintained that sickness and death in one family had no effect upon the move-

ments of the father, and a dying or dead child was on one occasion left in obedience to it: indeed, Dr. Hollingsworth is very positively of the opinion that the death of the twins themselves was the result of this rule, or, at least, was materially hastened thereby. This will be made apparent hereafter.

The evidences during life that the twins were physiologically distinct entities were very numerous and apparent. They were different in form, tastes, and disposition; all their physical functions were performed separately and unconnectedly. What Chang liked to eat, Eng detested. Eng was very good-natured, Chang cross and irritable. The sickness of one had no effect upon the other, so that while one would be suffering from fever the pulse of the other would beat at its natural rate. The twins not rarely suffered from bilious attacks, but one never suffered at the same time as the other; a circumstance which seems somewhat singular in view of the close connection which the post-mortem has shown to exist between the livers of the pair. Chang drank pretty heavily,—at times getting drunk; but Eng never felt any influence from the debauch of his brother,—a seemingly conclusive proof that there was no free interchange in their circulations.

The twins often quarrelled; and of course, under the circumstances, their quarrels were bitter. They sometimes came to blows, and on one occasion came under the jurisdiction of the courts. After one of these difficulties Chang and Eng applied to Dr. Hollingsworth to separate them, stating that they could not live longer together. Eng affirmed that Chang was so bad that he could live no longer with him; and Chang stated that he was satisfied to be separated, only asking that he be given an equal chance with his brother, and that the band be cut exactly in the middle. But as Dr. Hollingsworth advised very decidedly against this, and declined to interfere, cooler counsels prevailed.

In August, 1870, Chang suffered from a paralytic stroke, from which he never fully recovered; and during the last year of his life he several times said to Dr. Hollingsworth, "We can't live long."

On the Thursday evening preceding their death, the time having arrived for their departure from the house at which they were staying, the twins rode a mile and a half in an open wagon. The weather was very cold,—the night being the severest of the winter. Chang had been complaining for some days of cough, with distress and actual pain in the chest. He was so unwell that his wife thought he would be unable to bear the trip; but he finally went. On Friday morning Chang reported that he felt better, but that in the night he had had such

severe pain in the chest, and so much distress, that he thought he should have died.

The twins slept in a room by themselves or with only a very young child present; and some time in the course of Friday night they got up and sat by the fire. As they were accustomed to do this frequently, nothing was thought of it by those of the family who saw them, even though they heard Eng saying he was sleepy and wanted to retire, and Chang insisting on remaining up, stating that his breathing was so bad that it would kill him to lie down. Finally, however, the couple went to bed again, and after an hour or so the family heard some one call. No one went to the twins for some little time, and, when they did go, Chang was dead, and Eng was awake. He told his wife that he was very "bad off," and could not live. He complained of agonizing pain and distress, especially in his limbs. His surface was covered with a cold sweat. At his request his wife and children rubbed his legs and arms, and pulled and stretched them forcibly. This was steadily continued until he went into a stupor, which took place about an hour after the family were alarmed. The stupor continued up to death: according to the statements of the family, there were no convulsions.

Dr. Hollingsworth did not reach the house until after the death of both of the twins. He found the wives, and especially the children, averse to any post-mortem being made, but, after much persuasion, obtained permission to put the bodies in a position to be preserved until he could obtain some one from Philadelphia to perform the autopsy. He placed the bodies, after they had been thoroughly cooled, in a coffin, which was put in a wooden box, which was, in its turn, enclosed in tin; the whole being buried in a dry cellar in such a way as to be imbedded in charcoal.

As bearing upon the question, What was the cause of the death of Chang? it is important to state that Dr. Hollingsworth had repeatedly told Chang and Eng that, in his opinion, the death of one did not necessarily compromise the life of the other; that he could separate them, by cutting close to the body of the dead one, without killing the living one. It would appear possible, in view of this, that the death of Eng was not simply the result of fright.

SHORTLY after the death of the Siamese Twins, Dr. William Pancoast requested the Mayor of Philadelphia to telegraph to the Mayor of Greensboro', North Carolina, in regard to the possibility of a post-mortem examination being obtained. To

this the Mayor of Greensboro' substantially replied that he had neither knowledge nor power in the matter. When Dr. Hollingsworth, *en route* North, arrived at Greensboro', the telegram of Dr. Pancoast was handed to him. On the evening of his arrival at Philadelphia (Friday) he saw Dr. Pancoast and Prof. Gross, and a letter was written to the wives of the twins, proposing that Dr. Pancoast should come on to embalm and examine the bodies.

On Sunday Dr. Hollingsworth saw Prof. John Neill, and, on consultation, it was concluded that the matter was of public importance, and should not be confined to any single private individual. As the promptest method, it was deemed best to call a meeting of such physicians as were interested in the matter and could be hastily got together.

The meeting took place on the evening of Monday, January 26, 1874, at the house of Dr. Neill; but, although a number had been asked, only Prof. Leidy and Dr. Ruschenberger, besides Drs. Hollingsworth and Neill, were present at the conference. As the result of their deliberations, it was determined that two gentlemen should be at once dispatched to the homes of the twins, in order to examine and embalm the bodies as speedily as possible; and it was agreed that Drs. William H. Pancoast and Harrison Allen should be requested to go.

It will be seen at once that the College of Physicians was in no wise responsible for the acts of the Commission, although its name was freely used by the prominent Fellows engaged in the transaction. Indeed, these gentlemen, recognizing this, were prepared to meet the expenses of the trip had the College failed to endorse their action.

Owing to various obstacles and embarrassments, the Commission did not leave the city until Thursday night, January 29. At the request of Dr. Pancoast, Dr. Andrews went with the party as a companion and aid.

The Commission arrived at Mt. Airy on the evening of Saturday, January 31, and proceeded to the residence of Eng the following morning, in company with a photographer and Dr. William Hollingsworth, who is the family physician in the absence of Dr. Joseph Hollingsworth. The widows of the twins received the Commission hospitably, and a conference was at once entered into, at which the "Mistresses" Bunker, the Commission, Dr. Hollingsworth, and the widows' legal adviser were present. It was then agreed that, under consideration of embalming the bodies of the twins, permission would be granted to exhume and examine the structures distinguishing them, provided that no incisions should be made which would impair the ex-

ternal surface of the band. Subsequently it was agreed that limited incisions would be allowed on the posterior surface of the band. An agreement in writing was then drawn up, expressing the above restrictions, but extending authority to the Commission to remove the bodies to Philadelphia, provided that they be kept there in a fire-proof building, and held subject to the commands of the families when informed of the completion of the embalming process.

The object of the visit of the Commission, having been noised about the country, had attracted a crowd of curious people, who were willing enough to give the necessary aid in exhuming the bodies. The circumstances attending this were briefly as follows. The bodies were buried in the cellar of Eng's house, in a shallow grave, which had been covered with a tumulus of powdered charcoal. This being removed revealed several planks covering an outer wooden box, which, in turn, enclosed a tin encasement to the coffin. After unsoldering the tin box, the coffin was carried to the second floor of the house, to a large chamber. The lid was unscrewed, and the object of the search of the Commission was exposed to view. It was certainly an anxious moment. Fifteen days had elapsed since death, and no preservative had been employed. It was an agreeable surprise, therefore, that no odor of decomposition escaped into the room, and that the features gave no evidence of impending decay. On the contrary, the face of Eng was that of one sleeping; and the only unfavorable appearance in Chang was a slight lividity of the lips and a purplish discoloration about the ears. The widows at this point entered the room, and, amid the respectful silence of all present, took a last look at the remains.

The room was then cleared of all not connected with the work of the Commission; the bodies were disrobed, and preparations at once begun to secure photographs. The bodies were held in an erect position, and negatives of the entire figures, and views of the band at short foci, were secured. The day being cloudy, much time was necessarily expended in obtaining these pictures,—time sufficient for a number of observations upon the external appearance of the bodies to be recorded. The notes are given just as they were taken at the time:

Examination made Sunday, February 1, 1874, fifteen days and eight hours after the death of Chang.

The bodies were found in the coffin in a good state of preservation; there was a slight cadaveric odor about Chang, with marked passive congestion of the back of the arms and neck on both sides, and in a less degree

of the posterior aspect of the forearms, buttocks, thighs, and legs; there was none on the feet, where, however, there was marked fulness of the superficial veins; this was better marked on the left side. There was a greenish discoloration on the anterior abdominal wall.

Face.—Lips moist and discolored; peculiar reddish congestion sparsely distributed over malar prominence and beneath ear. The thoracic discoloration was much deeper on the side next to Eng.

The left nipple was visible in front well towards the middle line, the right one just showing. The fingers of the right hand—the paralyzed side—were forcibly flexed, although *rigor mortis* was absent.

In Eng there was passive congestion of back, most marked on buttocks and infra-spinous spaces—none on the front of the body; slight greenish discoloration of anterior abdominal wall.

In both subjects the hair of the head was gray.

On the *pubis* of each subject the hair of the *left side* was gray, that of the *right side*, black.

The process of embalming was now begun. Incisions were made to the outer side of the median line of the abdomen in each individual, extending from the inferior margin of the thorax to a point midway between the symphysis pubis and the anterior superior spinous process of the ilium. The aorta was reached after the usual method, but was found to be in an atheromatous condition, compelling the selection of the left primitive iliac for the insertion of the pipe. A solution of chloride of zinc was then injected.

After the embalmment had been completed, the incision was continued upward and inward towards the band. Examination of the band through this incision convinced the Commission of the complex nature of the band, and suggested the suspension of a complete study of the parts until removal of the bodies to Philadelphia. The fact that the photograph had been far from satisfactory strengthened the Commission in its decision to stop the investigation at this stage. The incisions were, therefore, sewn up, the clothing readjusted, and the bodies placed in the coffin and conveyed to Mt. Airy. Here the tin box which was used for the temporary burial was again brought into use, and the lid carefully resoldered. Without delay the Commission started on its return, expressing the bodies at Salem.

The Commission arrived in Philadelphia, February 5, having been absent one week.

Upon the arrival of the bodies at the College of Physicians, they were placed in the care of the committee upon the Mütter Museum and of the Hall Committee, and were closely locked and guarded until a special meeting of the College was called, upon Monday evening, February 8, when, after

considerable discussion, it was agreed that the College should accept the action of its Fellows and pay the expenses of the trip. Further, a vote of thanks was given to the gentlemen who went to North Carolina, and to Dr. Hollingsworth, and the Mütter Committee was authorized to appropriate three hundred and fifty dollars for the preparation of casts and photographs, which should remain the property of the Museum. Finally, the College appointed the Mütter Museum Committee and the original Commission (Drs. Pancoast and Allen) as a joint committee for carrying out the examination of the Siamese Twins; it being understood that a report and a demonstration of the specimens were to be made to a subsequent meeting of the College; also, that the dissections and the report were to be the work of the original Commission.

On Tuesday, the 10th instant, they were exposed for study: they were at that time found in a satisfactory condition, except the right lower extremity of Chang, which required immediate care to prevent further destructive changes taking place.

THE OLD SAD STORY.

WE learn from the London *Lancet* that Mr. Webb, editor of *The Medical Times and Gazette*, recently died suddenly at the age of forty-seven,—just at the time when brilliant professional success was coming to him,—leaving a widow and ten children to struggle through poverty, aided only by an annual income from settled property of about six hundred dollars a year. Surely it is a wrong system which brings remunerative labor only at an age when other men are thinking of the long rest that finally comes to all.

WE have received an essay from its anonymous author entitled "Homocultology," in which it is proposed to cure the human flesh of ills physical, mental, and spiritual, by castration, so as to prevent the perpetuation of any but perfect types. We can only say that in this case we think "charity should commence at home."

SIR SAMUEL BAKER asserts his belief that Dr. Livingstone is still alive. His speech before the Royal Geographical Society appears to have convinced Sir Henry Rawlinson and the Society that the probabilities are in favor of Dr. Livingstone's being still alive.

THE BIDDENDEN MAIDS.

WE are indebted to Dr. Walter F. Atlee for a cake or cracker, about four inches long by two inches broad, which, with the circular that is copied below, was given him some years since by a patient who had lately come to this country from Biddenden, England. The man stated that the crackers were doled out year after year as directed by the will of the sisters, and as had been done regularly since their death. The circumstance is very interesting, as showing the way in which these old foundations are maintained in England for many centuries. Scientifically, the chief interest attaches to the fact that these two individuals, although so closely joined, lived for over thirty years. The union appears to have been more close than that between the Siamese Twins.

The cake is apparently a water-cracker, and is in the shape of a tomb-stone with a figure of the twins upon its face. This effigy represents two women joined together as in the accompanying wood-cut, clad in short, very low, tight-laced bodices, and hooped skirts, with gigantic mammæ, of singularly perfect workmanship, above the bodices. Over the figures is an inscription like that in a similar position upon the wood-cut here given. On the skirts of one of the figures is,—

IN

1100

on the other is,—

A

34

Y

Below the figures is the word "Biddenden."

The wood-cut on our next page is a fac-simile of that upon the circular.

We have afforded this matter so much room in today's issue because, so far as we know, these ladies have not elsewhere figured in a scientific journal. As they were evidently covetous of posthumous fame, we doubt not that their manes will be most grateful to us for thus honoring them, after nearly eight centuries, during which they have waited for embalming.

We are informed that there is in existence a very old English book containing receipts and accounts of what are vulgarly known as "curiosities," in which these faithful sisters and fast friends are spoken of in detail. Unfortunately, we have not been able to obtain a sight of the volume.

We see no reason for doubting the authenticity of the record. The statement that the twins died within six hours of each other is strong internal

evidence of its truth, since an ignorant person making up an account would not be likely to conform so closely to the facts of experience.



A SHORT AND CONCISE ACCOUNT OF
ELIZA & MARY CHULKHURST,
WHO WERE BORN JOINED TOGETHER BY THE HIPS AND SHOULDERS,
IN THE YEAR OF OUR LORD, 1100,
AT BIDDENDEN, IN THE COUNTY OF KENT.
COMMONLY CALLED
THE BIDDENDEN MAIDS.

THE reader will observe by the Plate of them, that they lived together in the above state Thirty-four Years, at the expiration of which time one of them was taken ill and in a short time died; the surviving one was advised to be separated from the Body of her deceased Sister by dissection, but she absolutely refused the separation by saying these words,—“As we came together we will also go together,” and in the space of about Six Hours after her Sister’s decease, she was taken ill and died also.

By their Will, they bequeathed to the Churchwardens of the Parish of Biddenden and their Successors Churchwardens for ever, certain Pieces or Parcels of Land in the Parish of Biddenden, containing Twenty Acres, more or less, which now let at 40 Guineas per annum. There are usually made in commemoration of these wonderful Phænomena of Nature, about 1,000 Rolls with their Impressions printed on them, and given away to all Strangers on Easter Sunday after Divine Service in the after-

noon: also about 300 Quartern Loaves and Cheese in proportion, to all the Poor Inhabitants of the said Parish.

CORRESPONDENCE.

EXCESSIVE FECUNDITY.

TO THE EDITOR OF THE PHILADELPHIA MEDICAL TIMES:

RECENTLY there have come to my notice the facts of a somewhat remarkable case,—that of a lady who had eight living children in the short space of two years, four months, and twenty-four days: three children born on the 8th of January, 1742, all of whom died on the same day; three children born on the 3d of March, 1743, all of whom died on the same day; two children born on the 1st of June, 1744, one of whom died on the same day, the other lived to be twelve years of age.

Yours truly,

T. H. ANDREWS.

PHILADA., Jan. 22, 1874.

INSOMNIA.—Dr. E. P. Hurd, of Newburyport, Massachusetts (*Boston Medical and Surgical Journal*), in his address before the New Hampshire Medical Society, states that he has found chloral hydrate especially useful in the insomnia of infants. One grain may be given to a restless infant every hour till sleep is induced. Gelsemium admirably fulfils many of the requirements of a hypnotic, for its action seems to be largely that of an exalter of sympathetic function, while it lessens cerebral congestion. Three drops of tincture of gelsemium, with three of laudanum and ten grains of bromide of potassium, every two hours, have succeeded in breaking up insomnia when other remedies have failed.

TREATMENT OF ACUTE ARTICULAR RHEUMATISM BY MEANS OF IMMOVABLE BANDAGES.—In the *Archiv d. Heilk.*, Heft 5, 1873, Dr. Oehme relates his experience of the above means of treatment in forty-five cases of rheumatism. After comparison with various means of treatment employed in forty-five other similar cases, Dr. Oehme stated the following results in favor of the bandage system: 1. The pain is considerably lessened; 2. The duration of the fever is much shortened; 3. The duration of the whole attack is considerably abbreviated.—*London Lancet*.

POISONING BY THE ACID PERNITRATE OF MERCURY (*The Lancet*, January 3, 1874).—H. Stanley Gale reports a case of lupus of the cheek with red and soft but non-ulcerating tubercles, in which the pernitrate of mercury was applied over a space not larger than a florin. The pain caused was excessively acute. In about ten hours there came on a sudden, profuse vomiting of yellowish matter, together with griping and purging, the motions being streaked with blood. There were also cold sweats, with a sense of constriction about the pharynx. The pulse was small, and only 56. The vomiting was increased even by the use of ice, and came on every five or ten minutes for three hours, after which there was a tendency to sleep, and the symptoms gradually diminished in severity. The patient was a strong, healthy man, in the prime of life.

A NEW SYMPTOM OF BROMISM.—Dr. Hayden records (*Irish Hospital Gazette*, February 2, 1874) green vision as having been caused by bromide of potassium in a case under his care.

REVIEWS AND BOOK NOTICES.

DISEASES OF THE EAR, INCLUDING THE NECESSARY ANATOMY OF THE DIFFERENT PARTS OF THE ORGAN IMMEDIATELY PRECEDING THE CONSIDERATION OF THE DISEASES OF THESE PARTS. By A. D. WILLIAMS, M.D., formerly Lecturer on Otology in the Miami Medical College, St. Louis, Mo. 8vo, pp. 290. 1873.

The fresh impetus imparted to otology by the introduction of Trötsch's mirror, and the rapid progress being achieved in this branch, are shown by the numerous works relating to this subject that are constantly appearing. The past year has been a very prolific one in otological literature: a fifth edition of Trötsch, comprising nearly 550 octavo pages, has appeared, and St. John Roosa, Weber-Liel, Keen, and Dalby have each issued during the past year respectable-sized tomes upon diseases of the ear. To this list must be added a number of lesser lights,—authors ambitious to erect unto themselves monuments more enduring than brass by audaciously adding to the already vast bulk of otological literature. New methods of investigation and treatment are being constantly instituted in this, until so recently, much-neglected branch. Let not the general reader, however, for one moment suppose that all of these recent publications are issued upon such justifiable grounds, or that they are always based upon extended clinical observations. It is remarkable what a sameness not only of matter but also of manner he will find in many of them, reminding him forcibly of what has been aptly styled "rehash." Certainly, much of his reading will strike him as being stale, flat, and unprofitable. It is the old story, "Of making many books there is no end:" fortunately, their perusal does not always entail the "much study" which is "a weariness of the flesh."

This book of Dr. Williams is one of the latest accessions upon our table. Being prefaced as representing "particularly Western ideas," and claiming to be the pioneer work on diseases of the ear of "the Great Mississippi Valley," we have read the entire book with avidity, in the illusive hope of discovering in what manner Western ideas upon otology differed from our own stereotyped notions; in the hope of finding something characteristic of Western energy,—some new idea really worthy of the Great Mississippi Valley, that destined centre of American wealth and culture. Alas for great expectations! The book, lacking in thoroughness and original research, has, like the surface of that great valley, a decided tendency to flatness.

The "necessary" anatomy of the different parts of the organ with which the author prefates the consideration of the diseases of the several divisions of the ear, though in the main correct, is surprisingly limited in quantity, and we doubt whether the veriest student's compendium would be found containing less.

Tenotomy of the tensor tympani muscles is spoken of as a possible means of relieving the tinnitus aurium so frequently attending the dry catarrhal inflammation of the middle ear. But it is very evident that this operation has not yet been attempted, as might be expected in one so manifestly conservative in his practice, hesitating to use mild astringent or alterative injections; who even points out (p. 123) the danger of forcing air into the cranial cavity (!) by forcibly inflating the drum.

The author avoids applying blisters behind the ear in children, having several times received "anything but benedictions from the mother." 'Tis a pity that all patients or their friends do not see the propriety of heaping "benedictions" upon those who cruelly torture them with blisters over the mastoid process, where they

are usually as efficacious as huge bill-posters upon a dilapidated wall are in preventing its ultimate destruction.

The colored lithograph is frightful: "opacification" of the membrane by inflammatory deposits, and of the text by careless proof-reading, are alike objectionable.

As to selecting this book,—to those who have the inclination to possess but a single thorough treatise upon the diseases of the ear, our advice is similar to that given by Punch to the young man with his matrimonial schemes: "Don't."

R. M. B.

THE ANATOMIST'S VADE-MECUM. By ERASMUS WILSON, F.R.S. Edited by GEORGE BUCHANAN, A.M., M.D., assisted by HENRY E. CLARK, M.R.C.S. Ninth Edition. Philadelphia, Lindsay & Blakiston, 1873.

Wilson's Anatomy has for many years been a favorite text-book with students, and it is not likely to lose ground by the appearance of this last edition. Professing to be merely a compendium and a guide-book for the student or the busy practitioner, and not laying claim to the rank of a complete treatise on anatomy, it yet contains nearly all the facts in connection with the construction of the body which are necessary in the diagnosis and treatment of disease. Much new material has been added, many passages completely rewritten, a number of fresh wood-cuts inserted, and, with a few unimportant exceptions, the book has been brought up to the level of the present day.

GLEANINGS FROM OUR EXCHANGES.

MANIPULATION IN THE TREATMENT OF SPRAINS (*New York Medical Journal*, January, 1874).—Dr. William R. Fisher reports the following interesting case:

A young woman fell from the top of a step-ladder and severely sprained her right ankle. The local application of ice and other antiphlogistic treatment enabled her at the end of ten days to make a short journey to her home. This was, however, followed by increased pain, swelling, and inflammation, which were again subdued by rest and cold dressings. During the next three months her foot improved slightly under the use of stimulating liniments; but by another fall she lost what little had been gained since the first accident. Iodine and frictions with camphorated oil reduced the pain and swelling and increased the motion at the ankle-joint, but this articulation remained weak and painful whenever use was attempted, and a point just below the external malleolus was exquisitely sensitive to pressure or upon motion. Five months after the original accident she entered a hospital; absolute rest in bed was enforced for two months, but when she got up her foot and ankle proved to be as useless as before, and her general health was decidedly impaired.

Galvanization, repeated blisters, and uniform pressure with wet sponges, as well as quinine, iron, and similar remedies, were all unproductive of any permanent good; and finally it was resolved to submit her to the treatment by manipulation. At this time she could walk a little upon crutches, using her left foot alone to receive her weight; there was an oedematous puffiness about the right ankle almost obliterating the malleoli; the foot had a bluish, dusky hue throughout, arising from a want of active circulation; the temperature of the right leg and foot was lower than that of the left. Pressure over the instep caused a soreness, along the skin below the external malleolus a sharp, darting pain. Passive movement at the ankle in the direction of flexion or extension, and especially lateral motion inward, excited the same sharp pain. Voluntary move-

ment was confined to the toes, and even there, required considerable effort for its performance.

The repeated attacks of acute inflammation in this case had probably been the cause of its long duration, and had resulted in the formation of an unusually large amount of plastic exudation and fibrinous adhesions. The indications all pointed to the sluggish circulation in the ankle and foot as the chief obstacle to improvement.

Treatment was commenced by a general kneading and shampooing of the limbs and body until the patient had become used to the process, but after a few days the manipulations were performed as follows: The whole limb from the knee down was first rubbed and kneaded for twenty minutes, lightly where the parts were tender, forcibly where the pressure was well borne. The skin was sponged with water and dried with a towel whenever the epidermis became dry and heated by the friction. The toes were passively exercised in various directions, and the ankle-joint was flexed and extended; the extent of movement being governed by the amount of pain it produced. These manœuvres occupied about five minutes, and were followed by the kneading and frictions a little more forcibly administered, which in turn gave way to the passive movements until the whole had continued for an hour and twenty minutes. At its termination there was a decided increase of motion and diminution of pain. This was repeated daily, the movements of the joint being gradually increased in force and length of the application, while the kneading and frictions were lessened.

On the seventh day of treatment, passive motion of the joint was free in every direction and entirely painless; the adhesions had all given way as the force of the manipulations had been increased, snapping audibly one after the other; the foot was warm, there was no puffiness, and she was able to wear the same-sized shoe on the right as on the left foot. After twenty-one days of treatment, she gave up crutches altogether, and four days later she went to the sea-shore. Since then her progress has been steady, and she is practically cured.

Dr. Fisher believes that of all the means which are recommended for the treatment of sprains, manipulation is the simplest, the easiest in application, and the most efficacious. Quoting from M. Bizet, he says, "The cure by manipulation is the more prompt and certain in proportion as the remedy follows upon the accident, and it may be wrought both in simple and in complicated sprains, except in the case of fracture of the articular extremities."

TRANSFUSION OF BLOOD (*The British Medical Journal*, January 10, 1874).—Henry M. Madge, M.D., considers in detail the various forms of transfusion now in vogue which have been attended with the greatest success:

Transfusion with defibrinated blood.—The great advantage of this form is that there is no fear of clotting. The balance of scientific opinion is in favor of the theory that fibrin as it exists in venous blood is a waste product, and that the real revivifying element is the oxygen contained in the red corpuscles; but, be this as it may, the real reason for getting rid of the fibrin is that it interferes with the operation.

The blood must be carefully whipped with a *clean* fork, stick, or glass rod, and strained through fine linen two or three times. In the instruments which have been devised for using defibrinated blood, the great aim seems to have been to prevent air from entering the veins; but no special apparatus is necessary, and a common syringe has often been used with success.

2. Mediate transfusion with pure blood.—The advocates of this plan maintain that fibrin is an essential element of the blood,—that it favors coagulation,

helps to build up the tissues, and that when its removal is attempted there will always remain small particles or shreds which may produce pyæmia or embolism. It is certainly true that in many cases of recovery from impending death, after transfusion with defibrinated blood patients have died in a few weeks from pyæmia; but of course this may have arisen from various other causes.

With pure blood, however, clots are apt to form and block up the instruments; and, what is of more consequence, small clots may enter the vein, and lead, like carelessly defibrinated blood, to pyæmia and embolism.

Until recently it was thought important that a high temperature should be maintained to prevent coagulation; but it is now known that that process is rather favored by heat and is retarded by cold. The hurry to get through this form of the operation, for fear of clotting, is certainly one of its drawbacks. The great point is to have everything ready, and not to take the blood from the arm of the donor until the arm of the patient is prepared and ready to receive it.

The quantity used has been from four to twelve ounces, or in one case twenty ounces.

The entrance of air into the veins has always been one of the bugbears of transfusion, but there is now reason to think that too much has been made of it. Oré has shown that a small quantity of air thrown into the femoral vein of a dog does no harm; so, although of course the less air admitted the better, one need not be afraid in case of emergency to use an ordinary syringe.

3. Immediate transfusion from vein to vein.—It has been objected to this method that the blood thus used contains all the impure *débris* of the tissues, and must, therefore, be injurious; but the veins are certainly proper receptacles for venous blood, and once in the patient's system it soon becomes arterial. The current of blood in the veins being without impetus, the difficulty of sending blood from vein to vein has been simply and ingeniously met by Dr. Aveling. This instrument consists of a small india-rubber tube, about a foot long, with a bulb in the centre. The ends are supplied with canules for entering the veins, and the blood is propelled along the tube by a manipulation of the bulb and of the tube itself, a knowledge of which can be acquired only by practice.

4. Immediate transfusion from artery to vein.—This is the oldest form of transfusion, and has the advantage that the blood is purer than in the other varieties. Whenever it is used, the blood of the lamb is employed, as opening an important artery in the human subject is generally considered too serious an undertaking. The animal must be firmly secured by straps, the slightest movement being fatal to the operation. Dr. Madge thinks that, in the present state of our knowledge, each of these four principal forms may be employed with an almost equal chance of success.

ICE CLYSTERS IN THE TREATMENT OF DYSENTERY (by Dr. Bodo Wenzel).—In my travels during the past and present years, in the position of ship-surgeon, to Havana, New Orleans, and New York, I had occasion to treat a large number of cases of dysentery, both on shipboard and on land. Among the various agents to which I was compelled to resort in obstinate cases, one showed itself especially beneficial, and at the same time extraordinarily simple, cheap, and innocuous in application. So far as I know, it has never been used in general practice. I refer to clysters of ice-water, or rather of finely-powdered ice.

I was led to adopt this treatment in the following way. On the passage from New York I had on the vessel one extremely aggravated case of dysentery. It was characterized by high fever, severe pains in the abdomen, and especially by so exceedingly abundant hemorrhages with the very frequent stools, that the loss of blood alone involved direct danger to life, and induced me to order

in symptomatic treatment ice-water clysters every two hours.

A surprisingly happy effect ensued; not only in the fact that the hemorrhages immediately checked up and ceased altogether, but also in the almost immediate abolition of the distressing tenesmus, with a reduction of the whole febrile process. I ceased all other medication. The patient himself, so soon as he felt the least manifestation of pain, called for ice-clysters at once, and, under their use alone, this case, one of the worst which I have ever seen, so far recovered in fourteen days that he went ashore at Hamburg with good appetite, etc.,—in short, in perfect health.

Encouraged with this experience, I tried this treatment in less severe and in chronic cases, also on myself, for I did not escape attack, when I found that in all the acute and recent cases, light as well as severe, the same excellent results followed. I was compelled to use only rarely small doses of opium in addition. In most cases the medication mentioned was the sole treatment. On the other hand, I must say that in chronic dysentery, in old and recurrent cases, this means, like all others, is of less or only of transitory benefit.

I am justified in stating, then, that *in all acute and recent cases an energetic local antiphlogosis is a most effective, perhaps the most effective, treatment of dysentery.*—*Berliner Klinische Wochenschrift*, Dec. 1, 1873; from *The Clinic*.

CASE OF INTRA-RECTO-ABDOMINAL MANUAL EXPLO-
RATION (*New York Medical Journal*, February, 1874).

—Dr. Leale reports the case of a woman, æt. 45, who, while suffering intensely from an attack of dysmenorrhœa, drank, with suicidal intent, two ounces by weight of pure chloroform. She was seen half an hour after, at which time she was profoundly anesthetized, and had not vomited. Free emesis was produced by salt-and-water, but the ejecta did not emit the slightest odor of chloroform, while at the same time the expirations were strongly charged with its vapor. The stomach was washed out by means of a pump, and about a pint of water (100° Fahr.) was injected to act as a brisk diuretic. Her pupils were moderately dilated, and did not respond to light; conjunctiva insensible. Within half an hour the pulse-rate increased from 72 to 140, the heart's action growing very feeble; the surface of the body became cold and cyanotic, and death from asthenia was evidently impending. At this time the hand was cautiously carried through the sphincter ani, passed along the rectum and the sigmoid flexure into the descending colon. Direct irritation of the solar plexus of the great sympathetic nerve was then employed, and the hand carefully withdrawn.

A return to consciousness speedily followed, and the case resulted in complete recovery.

SUSPECTED PREGNANCY—FOREIGN BODY IN THE
BLADDER (*The Lancet*, January 24, 1874).—Mr. T.

W. Hine relates the case of a girl, æt. 17, who was admitted to the Hospital for Women, having been dismissed from her situation on suspicion of being pregnant. She had not menstruated for six months; her abdomen was very prominent; her breasts were large and full, the nipples firm and projecting from a dark, well-defined areola, which was studded with enlarged follicles; there was no milk; she had had severe attacks of vomiting. Since the cessation of menstruation she had suffered from temporary attacks of incontinence of urine, and had not passed more than a wineglassful at any time, but micturition was painless. The urine was thick, dark, turbid, and offensive. On passing a metallic catheter into the bladder a large calculous mass was struck, and was subsequently removed with the lithotrite. It proved to be a tooth-brush handle encrusted with urates and phosphates. The girl admitted having

used it to relieve stoppage of urine. In a week she was discharged well, and twenty-five days afterwards she menstruated for the first time in seven months.

THEORETICAL AND EXPERIMENTAL RESEARCHES ON
THE CAUSES AND MECHANISM OF THE CIRCULATION IN
THE LIVER—THESIS BY M. ROSAPPEL (M. DUVAL).—
In considering the hepatic circulation, M. Rosapelly first endeavored to define clearly thoracic aspiration and to determine its variations; he then passed directly to the study of the venous circulation of the liver, touching on the arterial circulation only so far as it enabled him to establish his conclusions. The methods used in these investigations were the same as those employed by Marey and P. Bert in exploring other parts of the circulatory apparatus. He found that thoracic aspiration, although periodically increased in intensity at each inspiration, is continued throughout the whole respiratory act, and that its principal cause is the dilatation of the mediastinum by the pulmonary retractility or elasticity. This elasticity, which is never satisfied unless there is an artificial opening in the walls of the chest, prevents all the force of the atmospheric pressure from being exercised on the organs situated in the mediastinum: these organs, therefore, are only subjected to a negative pressure, which of course is greatest during inspiration; for at that time, the thorax being dilated, there is a larger surface to be acted upon.

The author also proves that the action of the diaphragm produces an effect on the portal vein just the reverse of that which the thoracic aspiration exercises on the vena cava and the hepatic veins. Hence it results that at each inspiration two causes concur to accelerate the current of blood in the liver,—viz., the increased pressure in the portal vein, and the diminished pressure in the hepatic veins. These causes, on the other hand, retard the blood-current during expiration.

It is to be regretted that no mention has been made of the influence of the vaso-motor nerves on the blood-vessels of the liver; but, notwithstanding this omission, M. Rosapelly's researches have gone far towards filling an important gap in the physiology of the circulatory system.—*Le Mouvement Médical*.

LOSS OF THE UPPER EXTREMITY AND SCAPULA—RE-
COVERY (*The Lancet*, January 3, 1874).—Dr. Katho-

litzky reports the case of a bricklayer, aged 37, who was caught in a piece of machinery in such a manner that his right arm and shoulder-blade were instantly torn off. He was seen an hour and a half after the accident; the wound was about ten inches long and eight inches wide, and extended downwards from the acromial end of the clavicle along the right side of the chest. The hemorrhage was inconsiderable, and no bleeding or pulsating vessel could be discovered. The action of the heart was extremely weak, with eighty pulsations per minute, and the right subclavian artery could hardly be felt. The size of the wound was diminished by bringing up the margins and holding them *in situ* by means of steel clamps; compresses were placed under the clavicle, and held in position by a bandage passing over the sound shoulder, and an iced water-dressing was applied. The pain was relieved by hypodermic injections; carbolic acid was added to the dressing on the third day, when superficial gangrene occurred; and on the fourteenth day the greater part of the wound had closed by first intention. Seven weeks after the accident the cure was complete.

ARSENICAL PAPER HANGINGS.—“Arsenic occurs not only in the bright papers, but also occasionally in the white or cream-colored enamel paper so frequently used for drawing-rooms, and in drab papers tinted with ochre.”—*The Lancet*, January 3, 1874.

MISCELLANY.

ORIGIN OF GUM.—According to the researches of various German investigators, gum is the product of a retrograde metamorphosis of cellulose. Mohl (*Botanische Zeitung*, 1857, p. 33) found that the cells of the pith and the medullary rays of a species of *Astragalus* at first had a normal appearance, and offered a cell-wall composed of ordinary cellulose. As the plant increased in age the walls of these medullary cells underwent a change, which affected first the outer layers of each wall, and extended irregularly towards the centre of the cell. By this change the cellulose was converted into tragacanth. Wigand has studied the formation of arabin and bassorin (*Jahrbücher f. wissenschaft. Botanik*, 1861, iii. p. 117) in the stem of the plum. According to his researches, the bassorin is formed first, and the arabin is the result of a further metamorphosis of it. This conversion of cellulose into gum has also been certified to by Kützing, by Hofmeister (*Berichte d. k. sachs. Gesellschaft d. Wissenschaft.*, 1858), by Nägeli (*Sitzungsberichte der k. bayerischen Akad. d. Wissenschaft.*, 1864), and by Cramer (Nägeli and Cramer's *Pflanzenphysiologie Untersuch.*, Heft iii.). It is, without any reasonable doubt, the only method in which gum is formed; and, as has been noted by the authorities mentioned, in the cactus, in the mistletoe, and in the fruit of various species of plants, probably all the mucilaginous vegetable principles are formed in this way. In the low algæ, during the formation of the motile reproductive bodies known as zoospores, the rapid conversion of the cellulose wall into a mucilaginous substance, soluble in water, always occurs.

THE HELIOPIKTOR.—In the *Berliner Klinische Wochenschrift* Dr. S. Th. Stein, of Frankfort-on-the-Main, gives a description of an instrument which he has invented, called the heliopiktor, by the use of which he claims that any one, although ignorant of the technicalities of photography, can obtain all the benefits of that art. No photographic atelier is needed; the plate upon which the impression is to be made is prepared automatically. The method possesses two principal advantages for physicians and surgeons over ordinary photography: 1. The plate is automatically prepared, so that any one ignorant of photography is able with the apparatus to produce good pictures. 2. The operation can be carried on in the light, so that a darkened chamber can be dispensed with as well as a photographic atelier specially arranged. The heliopiktor can be adjusted to the eye-piece of the microscope, so that pictures of objects under examination, magnified to any required degree, can be made. By means of special arrangement of mirrors, photographic pictures can be made of the various parts seen with the ophthalmoscope, laryngoscope, etc.

PUBLIC URINALS IN PARIS.—There are in Paris 730 places of public accommodation styled "urinoirs."

This number includes 40 having the shape of a kiosk, and belonging to the Compagnie des Kiosques, 234 of the same shape belonging to another company, and for each of which the city pays tribute; 228 having the shape of stalls or boxes lighted by gas, and about 200 having a central position, and three stalls on each side. The latter is the newest model, quite recently adopted. It is gratifying to know that the two uncovered slabs of slate so commonly met with at the angles of houses, and which exposed the occupiers to the gaze of passers-by, will be shortly entirely suppressed.—*The Lancet*.

EMULSION OF COD-LIVER OIL.—

R Ol. morrhue, f3viiij;
 Tragacanth., 3i;
 Sacchar. alb., 3iv;
 Ol. gaultheriæ, gtt. lx;
 " sassafras, gtt. l;
 " amygd. amar., gtt. x;
 Aquæ, f3viiij.

The tragacanth and sugar are to be dissolved in the water, and the mucilage strained. In this are to be incorporated first the essential oils and then the cod-liver oil. This makes an elegant-looking emulsion, not too thick, containing fifty per cent. of the oil, and of a rather pleasant taste and smell.—WILLIAM M. RICE, Jr., in *The American Journal of Pharmacy*.

RATIONAL MEDICINE WELL DEFINED.—The Italian journals relate that a vice-professor of the Faculty of Medicine of Naples, having asked permission of the Faculty to open a course on homœopathy, received the following answer: "The Faculty could not grant the authorization, seeing that rational medicine, which is taught on the basis of natural sciences, excludes allopathy as well as homœopathy, and, indeed, all absolute systems of medicine."—*The Lancet*, December 13.

THE INDIAN CINCHONA BARK.—At a late sale in London, part of a lot of mossed crown bark (*Cinchona officinalis*), the product of the plantations of the Neilgherry Hills, a range of mountains near the western coast of India, where the cinchona-tree has been for several years under cultivation, brought the great price of 5s. 9d. per pound. This is about \$1.40, gold rate. The whole amount disposed of on the occasion referred to was 23,646 pounds, at an average price of about seventy cents.

ACCORDING to the *Berliner Klinische Wochenschrift*, November 24, there is only about one-half the usual number of students at the various clinics of the city. The journal quoted attributes this falling-off chiefly to the very greatly increased cost of living in Berlin.

FOR THE CHAFING OF INFANTS.—Take of powdered starch two parts, white oxide of zinc one part. Make a fine, well-mixed powder. Dust the abraded parts with the powder, after proper cleansing.—*Exchange*.

THE death of Max Schultze, the celebrated anatomist, is stated to have occurred on the 16th ult., at Bonn.

NOTES AND QUERIES.

TO THE EDITOR OF THE PHILADELPHIA MEDICAL TIMES:

SIR,—Your correspondent Vertex must, judging from his language, have had an exceedingly bad taste in his mouth when he wrote the letter which appears in your last number; but he seems to have grievances, and to wish them redressed. So far as can be gathered from his choice epithets, he objects, in common with the *Times*, to anything that may resemble advertising, except, perhaps, the name upon the window-shutter; and, moreover, seems to be particularly grieved that some people, who might fall to the share of struggling practitioners, endeavor to get free treatment at dispensaries and similar institutions. He is also opposed to hospital service in general: at least the size of his type and his elegance of expression favor that supposition. As, however, so far as I can judge, the weight of his article is intended to fall upon dispensaries, their physicians and patients, I should be glad of the opportunity of making a few remarks upon this part of his letter.

Now, considering that he, like the rest of us, is evidently anxious to get patients, it would seem, perhaps, injudicious to stigmatize that class of persons to which alone he thinks himself entitled to have access as "curs," "mongrels," and "whelps," all of low degree." It may be well enough to revile a poor patient, but to sneer at his position in society is, in a democratic country at least, injudicious. In fact, if he does it often I do not wonder much that there is a class "even from which he is debarred."

Most young physicians strive to obtain experience, believing that their future success must depend upon it; and hence arises, I believe, the desire to obtain dispensary and hospital positions. For I should like to ask Vertex whether he really believes that dispensary physicians increase their private practice while they are serving. I do not; and I fancy that the weight of the evidence is against Vertex. If a man lectures, and lectures well, he may obtain some consultation-practice, and from the very class which Vertex claims to represent; but as for ordinary practice, as Vertex says himself, so long as the patient can get advice from the dispensary doctor free, he is not inclined to pay any one for it; not even the man who is ready to give it to him for nothing. Afterwards, when experience has been acquired, practice does increase, no doubt; but, for the sake of humanity, Vertex might suppose that it is ability rather than charlatanism which has commanded success in the case of our leading practitioners. He should do so, or else, when his own success arouses the envy of future Vertexes, they may choose to consider it due less to his ability than to the suave manners and command of courtly language shadowed forth in his letter.

That lawyers, or even clergymen, do get paid, does not seem to me a convincing proof that medical men should not manage their own affairs as suits their own feelings; and the disparity seems removed when it is considered that, according to Vertex, while medical men do serve for nothing, it is for nothing,—save self-interest.

Medical opinions, it seems to me, have all the weight they are entitled to, from the condition of the medical art. Medical practice, as a rule, commands respect and obedience in proportion to its quality, and that quality can be improved only by experience,—an experience which can hardly be gained except by means of the dispensary system. That patients are taken away from some is, no doubt, true; and I freely admit that some persons well able to pay receive medical aid gratis, probably as much to the annoyance of the dispensary physician as of any other; but it seems to me as if there were rather the fault of the patient than of the physician; and while we all would be glad to see this class of persons forced to pay, it is hard to suggest a feasible remedy for the evil. Certainly Vertex does not do it, though, feeling so keenly as he does, it would be well if a little of his superfluous energy could be brought to bear upon the practical solution of the difficulty.

In conclusion, as I believe that the change must be made to some extent, at least among the patients, I may be pardoned for suggesting to Vertex that in writing to the daily press he should be less liberal in the use of such language as that which he seems to think appropriate when addressing the editor of the *Philadelphia Medical Times*.

Respectfully,

X.

PHILADELPHIA, February 8, 1874.

TO THE EDITOR OF THE PHILADELPHIA MEDICAL TIMES:

DEAR SIR,—Will you permit me, through your valuable columns, to ask for professional opinions upon a matter in regard to which, unless I have held mistaken views, there is some laxity of practice in high places?

Mr. Greenbag, a lawyer of excellent professional and social standing, as been more or less constantly under my care for several years, on ac-

count of a tedious and troublesome, but not dangerous, malady. Some ten months ago, at his request, I called Dr. Bistoury to see him with me. After a most careful consultation, in which all the available plans of treatment were discussed, the course which I had been pursuing was decided to be the best, and I so informed Mr. Greenbag on the only subsequent occasion when I saw him professionally.

About two months ago, meeting Mr. Greenbag in the street, I was told by him that he was then, and had been almost ever since our consultation, under Dr. Bistoury's care for the same trouble. The treatment had been slightly changed, but no improvement had ensued.

Now, Mr. Editor, it seems to me that Dr. Bistoury's course towards me was neither friendly nor professionally correct. I had always regarded him as a man in whose honor I could implicitly trust,—as one whom I could call to the bedside of a patient without the risk of losing my own place there. Physicians would never call consultations if they were certain of being supplanted by those so summoned. And in proportion to the risk of it will they hesitate in so doing. If this is a legitimate thing,—if the consultant may quietly assume the charge of the case, and leave his friend and professional brother out in the cold, the former being without blame, and the latter without just cause of complaint,—the sooner we know it the better. Most assuredly I shall not give Dr. Bistoury another opportunity of "gobbling up" one of my patients, if I can help it; and yet I would rather have lost a dozen cases than have found out that my trust in him was misplaced.

If I am wrong in this matter, my own practice in regard to it has always been needlessly rigid, and I hope to be set right.

Respectfully yours,

SAMUEL SCALPEL.

January 23, 1874.

Answer.

THE relations of consultant and family physicians certainly involve many very delicate ethical questions. But we think consultants will find it most profitable to refuse to have anything to do with patients whom they have seen with their family physician. Whether this be so or not, in the present instance Dr. Bistoury seems to us to have been guilty of a clear infraction of Art. v. Sec. 4 of the Code of Ethics, which reads as follows:

"ART. v. SEC. 4.—A physician ought not to take charge of, or prescribe for, a patient who has recently been under the care of another member of the faculty in the same illness, except in cases of sudden emergency, or in consultation with the physician previously in attendance, or when the latter has relinquished the case, or been regularly notified that his services are no longer desired."

TO THE EDITOR OF THE PHILADELPHIA MEDICAL TIMES:

PERMIT me to express an opinion in regard to two or three points made by "Vertex" in your journal of February 7.

I heartily approve of the spirit of the first part of his communication. The SLIGHTS to which the younger members are subjected by a few of the older and established, yet grasping, members of our profession, are disgraceful, and come clearly within the jurisdiction of the Code of Ethics.

But "Vertex" makes a poor show in attempting to convince his readers that hospitals and such like institutions are "destined to crush not only the struggling practitioner, but to embarrass the whole profession."

Now, I take it that the history of medicine, past and present, justifies the assertion that our profession advances in intelligence, honor, and usefulness, and approaches nearer to a "fixed science," just in proportion as these said hospital facilities are increased.

Who are the men leading us out from the superstition, mystery, and errors of empiricism,—who are our investigators and communicators of advanced knowledge, but hospital men? Where could such an accumulation of reliable statistics be obtained, but in hospitals and dispensaries?

As in all other professions, ours owes its advancement in knowledge to the labors of a comparatively few of its members.

The hospital is almost invariably the field of their investigations.

The results become common property. We gather where they sowed.

Ex.

PHILADELPHIA COUNTY MEDICAL SOCIETY.

THE next conversational meeting will be held Wednesday evening, February 25, 1874, at 8 o'clock.

Dr. L. Turnbull will read a paper on "Tinnitus Aurium."

All regular practitioners of medicine in the city are cordially invited.

SATURDAY, FEBRUARY 28, 1874.

ORIGINAL COMMUNICATIONS.

THE USE OF ALCOHOL MEDICINALLY AND SOCIALLY.

BY GEORGE KERR, M.D.

IN treating this subject, I refer to the various substances in which alcohol is contained,—viz., brandy, whisky, wine, ale, beer, etc., and also spirits of wine as used in the various tinctures and medicinal preparations.

It is not my intention to speak of alcohol *per se*, but as used by the physician in the treatment of disease, and by individuals socially. Alcohol in its various forms until within a few years has been used by many in the profession as a cure-all.

Is alcohol a medicine? Here the question arises, What is a medicine? "A medicine is any substance, liquid or solid, that has the property of curing or mitigating disease in animals, or that is used for that purpose." The highest medical authorities are divided upon this question; some contend for its use, while others deny that it has any beneficial influence in disease.

Several years ago, in one or two cases I thought it had some good effect; but since, I have watched its action more closely, and without prejudice I have come to the conclusion that it is of little or no use as a medicinal agent. It has been said by some writers that where alcohol has been used in asthenic diseases there is no danger of the patient becoming fond of it. I cannot endorse this statement. A patient of mine with consumption, who was taking brandy, whisky, etc., by my advice, and also at the recommendation of other physicians, became so infatuated with it that she could not do without it, and was almost constantly intoxicated. This patient was over thirty years of age when it was first ordered, and had had no previous taste for it. A member of this Society informed me that a number of years ago he directed gin to be given to one of his patients for Bright's disease of the kidney: that patient is now a confirmed drunkard. She had no taste for liquors previously.

Most writers on low febrile disease assert and believe that alcoholic liquors are necessary,—yea, indispensable. Indeed, one would suppose, in reading the different writers in favor of the alcohol-treatment, that there is no disease which it does not benefit; that it is the *ne plus ultra*, the food and the medicine—the something which, if it does not cure, nothing else will do any good. On the other hand, we quote Dr. Henderson, of Shanghai, and Dr. Bishop, of Naples, in their reports of fever-treatment without stimulants, which reduced the mortality from twenty-eight to seven per cent. Dr. T. K. Chambers, physician to the Prince of Wales, who under the alcoholic treatment lost one patient in five, and under the non-alcoholic treatment had only three deaths in one hundred and twenty cases, said to his students, in his clinical lectures, "Above all

I would warn you against employing wine as a substitute for the true restorative treatment" (p. 61). The adherents of this remedy say that when solids cannot be taken into the stomach, it will take their place, acting as a tonic and supplying the necessary animal heat. Dr. Archibald Billing says,—

"Tonics give strength; stimulants call it forth. Stimulants excite action, but action is not strength: on the contrary, over-action increases exhaustion. One thing necessary to the recovery of the nervous system in fever is arterial blood. To produce this of good quality, digestion and free respiration are requisite. The digestion having been disturbed, it is useless to supply other than fluid nutriment—milk being the best—until some renewal of nervous energy takes place. This restoration will not be expedited by stimulants." (Principles of Medicine, fourth edition, London, 1841.)

Professor W. S. Gardiner, of the University of Glasgow, in some statistics published in 1864, says, in regard to the treatment of typhus fever in the hospitals in that city,—

"In many hundred cases (nearly 600) of all ages, the mortality lessened exactly as the dose of alcohol diminished; milk and buttermilk being given in its place. Wine, reduced from an average of thirty-four ounces to two and a half, was followed by a reduction of deaths from seventeen to eleven per cent. Of two hundred and nine children under fifteen years of age treated without any alcohol, not one died, though the very same class of cases treated with alcohol in the infirmary had a mortality of six per cent."

Professor Lehman, in his *Physiological Chemistry*, remarks that—

"When once the fact is admitted that the first thing in many diseases is to furnish a copious supply of oxygen to the blood, which has been loaded with imperfectly-decomposed substances, and to remove as quickly as possible the carbonic acid which has accumulated in it, these observations will have afforded us true remedial agencies which exceed almost every other in the certainty of their action. We should forbid the use of spirituous drinks, and not even prescribe tinctures which hinder the necessary excretion of carbonic acid." (Vol. iii., Respiration.)

Dr. Anstie, a stickler for the use of alcohol, remarks that—

"Alcohol cannot be scientifically administered until the urine of the patient has been analyzed and the sphygmograph has been applied for many hours; otherwise mischief, not benefit, will result; even the slight and trivial symptom of flushing in the face is a sign of the first degree of the poisonous action,—namely, a vaso-motor paralysis,—and shows that we at least have touched the border-line at which the beneficial action of alcohol ceases and its poisonous effects begin." (*Lancet*, January 25, 1868.)

Dr. Markham, F.R.S., says in the *British Medical Journal*, October 5, 1861,—

"It is scarcely possible to read fairly the works of the distinguished physiologists who have discussed this question, without feeling that they have been, spite of themselves as it were, driven, by their honest adhesion to the legitimate consequences flowing from their premises, to the conclusion that alcohol is unnecessary and injurious to the human system."

During the last six years I have almost entirely abandoned the use of alcoholic stimulants in my prac-

tice. I feel safe in saying that I have not prescribed a quart during that time. During this time I have had many cases of smallpox, typhoid, bilious, and other fevers, which were treated entirely without alcohol, and with very good results. I believe these cases recuperated much more rapidly than those in which formerly I had used it. Alcohol has a strong affinity for, and a peculiar effect upon, the brain; its first action being that of a spur, or more properly an irritant, it immediately afterwards produces a paralyzing effect upon the brain and nerve-centres. As constant dropping will wear away a stone, so will the constant use of alcohol, in disease or otherwise, benumb and pervert the whole nervous system. It does not cease here. The effects upon the circulation are equally powerful, and productive of the most direful consequences. The circulating fluid coursing through the body becomes impoverished, the blood-globules or disks are withered, the coloring-matter is extracted, the liquor sanguinis, which in health is of a bright pink hue, assumes a muddy appearance; all of which has been abundantly proved by Professors Carl Schultz, Munroe, Böcker, and Virchow. Dr. Gordon, of the London Hospital, stated before the Parliamentary Committee on drunkenness, "that seventy-five cases of disease out of every hundred could be traced to drinking; and whilst at Edinburgh most of the bodies of moderate drinkers he examined were found diseased in the liver."

Two hundred years B.C., it was written by a Jewish sect that intoxicating wine is *φάρμακον ἀφροσύνης*—"the physic of fools." I have taken the liberty to translate it, "the physic to make fools."

In view of the fact that alcohol is being used by many of the people too freely, and perhaps prescribed injudiciously by some of our profession, what are we as physicians doing to prevent its ravages? Are we standing in the breach, manfully assuming the responsibility which to a great extent must rest upon us? Or do we follow this mighty throng with a medicinal lash, called alcoholic stimulants, goading and hurrying them on over the frightful precipice, increasing largely the number of victims? While we may differ on the medicinal use of alcohol, we doubtless agree on its baneful social influence.

CURIOSITIES OF COUGH.

Reported to the Medical Library and Journal Association, December 12, 1873,

BY L. ELSBERG, M.D.,

Professor of Laryngoscopy and Diseases of the Throat in the University of New York.

(Concluded from page 293.)

VI—FREQUENTLY patients have come to me with another kind of cough, or hack, or hem, which almost invariably reveals its origin by its acoustic properties. I refer to an epiglottic hack. This no words can describe, but it is easily recognized by the practised ear. It is a very unsatisfactory cough to the patient, there being no, or but very little, expectoration. I will give an aggravated instance, and be brief in its recital.

A. A. B., æt. 57 years, naval officer, has for many years occasionally had a sore throat, being rather liable to catarrhal troubles. During the past year he has enjoyed remarkably good health and freedom from throat-disease, until he was seized five or six weeks ago with a cough which is perfectly tremendous in violence and sound. The intervals of rest never last over an hour at a time, and occur mainly in the middle of the day, while towards evening the paroxysms assume the height of severity. He says that for seventeen nights he has not slept: nevertheless, if it were not for his cough he would be perfectly well. He is naturally robust and very strong, and when he coughs he shakes the whole house he is in, and the cough can be heard, he thinks, half a block away. I found the whole upper edge of the epiglottis ulcerated.

An epiglottic cough may depend upon active hyperæmia, or varicose veins, or erosion or ulceration of greater or less duration and severity and of varying extent. The tickling of the throat and dry hack met with at the coming of cold or changeable weather very frequently depend upon some irritation at the upper edge of the epiglottis. Laughing, talking, swallowing, may aggravate it, though sometimes, by swallowing especially bland or thick syrupy liquids, or by dissolving astringent or sedative troches in the mouth, it is soothed. When the pathological condition has been recognized, the cure by mainly local treatment is usually easy, though sometimes tedious.

In all the preceding cases the character of the cough itself, particularly its sound, constituted the curious feature. But I could relate to you another series of coughs curious for other reasons. Of these I shall mention only one of the most curious, namely, the case of a lady whose husband had told me some years ago that his wife had a paroxysm of coughing whenever he had sexual intercourse with her. In the course of time these attacks became so severe that intercourse was almost given up. Living in the country, and enjoying otherwise excellent health, she had long refused to consult a physician, until I saw her last August. She presented the very picture of health, and could by no means be called "nervous,"—the common epithet to be applied to most women nowadays. Twenty-nine years old, she has been married eight years, and never has been *enceinte*. She has passed through measles, chicken-pox, croup, and whooping-cough before her twelfth year; has not had scarlet fever, or diphtheria, or any other sickness, since; her throat has never pained or troubled her otherwise than that at every menstrual period from the first, which occurred when she was twelve years old, a cough sets in a day or so before the catamenia appear, and usually lasts, with varying intensity, the whole period. She has always been regular, except, perhaps, two or three times in her life; then temporary amenorrhœa was due to imprudence in taking cold, and she remembers that the cough at these times was a great deal worse. I must not omit to state that her mother was afflicted in a similar way, though perhaps not so severely, and also an only sister, who died some years ago unmarried. After childhood until her marriage she does not remember ever to have had any cough except at the men-

strual period; since marriage, intercourse brings it on more violently than menstruation. I examined her throat, and could find nothing abnormal. She bore the presence of the laryngeal mirror in the fauces very well; the epiglottis presented no obstacle, and not only the whole of the larynx but also the trachea down to the bifurcation was brought into view. There was nowhere congestion or abnormal coloration.

I desired her to be examined by one of the gynecologists of this city, but she refused, and I consented to make a vaginal examination. No sooner had I introduced my finger, while she was standing upright, than the cough commenced, despite her strenuous efforts to repress it. There was no difficulty encountered in either super-sensitiveness or contraction; there was no spasm or abnormal secretion. I pressed upon the walls of the vagina, and touched and circumscribed the vaginal portion of the uterus, and the paroxysm of coughing became so violent that tears streamed from her eyes, her face flushed, she perspired freely, brought up some little phlegm, and became quite exhausted. I gave her some anodyne syrup that I had at hand, but it was fully half an hour before the paroxysm was over. She said that while I examined her, she felt a sensation of choking and irritation in the throat. On repeating the laryngoscopic examination, I found the vocal bands a little hyperæmic from the coughing,—nothing else. I then made her take about half an ounce of brandy, and chloroformed her, her husband assuring me that he had himself given her chloroform a number of times without any deleterious effect. Before she was quite under the influence, she again began to cough so that I thought she would have another paroxysm. When she was wholly insensible, I carefully examined the introitus and the whole vagina. There was no difficulty in introducing a large-sized speculum or a sound into the uterus; the os uteri looked to me of normal size and perfectly healthy; there was no leucorrhœa, no ulcer, no disease of any kind to be found, and of course there was now no cough.

So far as I know, this is quite a unique case. In a former paper on the connection of throat with other diseases, I pointed out especially the remarkable and inexplicable sympathy between throat disease and vaginal, uterine, and ovarian disease, and I might multiply instances in which I have observed cough reflected from the female generative organs; but in this case I could not ascertain the existence of disease of any kind: there was certainly no vaginismus or hyperæsthesia, and no hysteria. Then the seemingly hereditary factor of the affection is curious. When I suggested to the patient that there must be some abnormal condition of the sexual organs, as she, a healthy woman with a healthy husband, ought not to be childless, she justly pointed to her mother, who was affected with a similar cough and had borne five children.

I may on some future occasion continue the narration of cases of curious coughs. For the present, my object will be accomplished if by the recital of these I can bring out some observed by others; for while it is probable that I, as a specialist, have seen

more curious cases of cough than any one general practitioner, others may have met with curiosities of cough in their practice, which it would be of great interest to have brought to the knowledge of the whole profession.

CORNEAL WART.*

BY C. A. ROBERTSON, M.D.,

Member of the American Ophthalmological Society; Ophthalmic and Aural Surgeon at St. Peter's Hospital, Albany, and at the Troy Hospital.

THIS case presents features of much interest, both to the profession and to the patient,—to the former for its instructiveness, and to the latter not merely for a fortunate escape from a dreadful and uncalled-for mutilation, but also for the restoration of sight to a blind eye.

The patient, named James Taylor, by occupation until recently a grocer, was about seventy years old. He had been afflicted for several years with a dermoid growth, or *wart*, which started on the outer and lower part of the right eyeball and early showed a tendency to intrude upon the transparent cornea. The patient called on me several times at an early period of his complaint, and I attempted to destroy the wart by cutting off its surface and then applying chromic acid. This treatment not proving successful, or for some other cause, he ceased his visits, and I lost sight of him entirely until he presented himself at the ophthalmic clinic at St. Peter's Hospital in October last.

My friend Dr. James L. Babcock, of this city, then advised that he should consult me, because he had learned that an opinion had been given at a certain medical institution that the growth on the eyeball was of a dangerous character, and that "the tumor" would grow until it became as large as his fist! The only thing to be done, said the sapient "oculist," was to "remove the eyeball." This being cut out of his head, of course "the tumor" would at the same time disappear!

Upon examination, I recognized my old *verrucous* acquaintance, only somewhat enlarged. In its growth the wart had confined itself within the limits of the cornea, which it entirely covered, except a very narrow tract at the upper inner margin. As it so completely covered the front of the eye, all sense of vision was, of course, obliterated.

In appearance the wart presented a roundish form and a whitish-gray color. To the touch it was soft and unctuous. In structure it was composed of papillæ, which were separable almost to the base; and near the lower edge these papillæ stood up in coarse filaments, or little crowded columns, almost a quarter of an inch high. From this they were graduated down until they were nearly on a level with the cornea at the region of most recent invasion.

In order effectually to rid my patient of this somewhat formidable wart, the eyelids were first held apart with the ordinary silver-wire speculum, and then, with delicate scissors curved on the flat, all the coarser portions which it was practicable to

* From a paper presented to the Medical Society of the State of New York.

cut were removed, leaving on the eye only the base of the structure as a raw surface. Then, taking a bent lance-shaped knife (*iridectome*), I carefully insinuated its edges under the upper sessile border of the excrescence, and, by gentle manipulation, teased away the adventitious growth from its connection with the surface of the cornea. When the operation was terminated, the color of the iris and the black pupil were visible, and the patient remarked that he could see objects in the room.

Very little reaction followed. The cornea steadily improved in clearness as the natural superficial or epithelial layer was reproduced, and within a very few weeks the sight became as good as in the other eye, in which the sight was perfect.

The last time I saw the patient was four months after the operation. There was no vestige of the old trouble to be seen, and the cure appeared to be perfect.

OPERATION ON FISTULA IN ANO WITH THE ELASTIC LIGATURE.

BY H. S. SCHELL, M.D.

THE elastic ligature which has lately been brought before the notice of the profession in connection with the removal of tumors and other operations, seems to have special adaptation to the cure of fistula in ano.

Every one knows how troublesome to the surgeon is the hemorrhage which is apt to follow the ordinary operation by the knife, and how irksome to the patient is the confinement to bed and the artificially-induced constipation which it is usually considered necessary to enforce.

I endeavored to obviate these difficulties by the employment of the elastic ligature in the case of a man, Michael D., aged 36, on whom I operated on the 9th ult., at St. Mary's Hospital.

The fistula, which had existed for several years, was of small extent, opening in the skin about half an inch from the verge of the anus, and within the bowel somewhat over an inch from its termination, embracing indeed but little more than the external sphincter ani.

The ligature was drawn through the fistula by means of an ordinary eyed probe, such as is found in every pocket-case of instruments, brought down outside the rectum, and tied pretty tightly.

An opium suppository was prescribed, to be used in case any pain followed the constriction of the parts. The suppository was not asked for, however, by the patient, who stated that he had no pain at all, and who went about the ward as long as he remained in it, assisting the nurse in the care of the other patients.

The ligature came away at stool on the fourth day, leaving a granulating wound, to which no further attention was paid, except as to cleanliness, and which healed in the usual manner.

So far as this case is concerned, therefore, the advantages to be derived from the employment of the elastic ligature in this operation appear to consist in—

1. The entire freedom from pain.
2. The avoidance of annoying hemorrhage.
3. There is no need of confinement to bed.
4. The bowels may be left to their ordinary regular habits.

The ligature used in this instance was of the kind employed by ladies for toilet purposes, and may be obtained at any trimming-store.

The best is composed of three strands of caoutchouc somewhat compressed within a plaited envelope of white silk into a round cord, and has the strength of an ordinary ligature.

In purchasing, the quality of the article may be judged by smartly stretching an inch or so several times; when, if unreliable, the gum will crack in various places and slightly project between the threads of the silk, giving the cord a rough, half-broken appearance. A good article has a soft, elastic feel, while the bad is hard and stiff.

It is better not to keep much on hand at a time, as the gum finally becomes hard and brittle.

NOTES OF HOSPITAL PRACTICE.

BELLEVUE HOSPITAL, NEW YORK.

Reported by F. W. CHAPIN, M.D.

TWO CASES OF ICTERUS.

CASE I.—Mary Q., æt. 70, domestic. Admitted November 27, 1873. Patient thinks her mother died of phthisis; her father "died of a sore leg," the sore beginning at the toe and extending over the foot and leg to the knee. Patient herself always enjoyed good health till ten years ago, when she strained herself while helping to carry a heavy stove up-stairs. The woman who was assisting her let the whole weight of the stove come upon her, so that she was obliged to put forth all her strength to save herself from falling. She says she felt stupid for two days after this, sleeping most of the time. Then her right arm and shoulder began to swell up, and became very painful. She was unable to raise the arm, and it was a year before she regained the use of it. Since then she has always had a pain in the right side, like a "stitch," whenever she has made any bodily exertion. Since the injury, she has been troubled with swelling of the limbs and the abdomen; and at one time, three or four years ago, her water was scanty in quantity. She has always been feeble since the injury, and unable to do much work.

One week before admission she began to have a feeling of heaviness in the head, and was sick at the stomach. In the evening of the day on which these symptoms occurred she was taken with severe pains across the loins and in the back, and her abdomen began to swell. These symptoms went away after the lapse of three days, leaving her very feverish.

From that time till admission—a space of four days—she had chills every night, followed by an increase of the fever.

On admission, patient is a well-nourished woman, quite markedly jaundiced. She does not know when the jaundice came on, as she has been living in dark apartments. She complains of slight pain in the right side. Urine is high-colored. Chemical and microscopic examination negative. Fæces are of dark-yellow color.

Liver extends to free borders of ribs, and two and a half inches to left of median line. No tenderness in this region.

Spleen normal in size.
Heart and lungs normal.
 November 28.—Jaundice increased. Slight flush of cheeks.
 November 29, A.M.—Temp. 100°; P.M., temp. 99°.
 November 30.—Patient was very thirsty and slightly delirious during the night.
 December 1, A.M.—Temp. 99½°.
Physical examination of chest negative.
 December 3, A.M.—Pulse 84; resp. 20; temp. 99¾°.
 Patient passed a very restless night; had chills and fever, alternating during the entire night. Had no pain, no headache; no nausea; eyesight as good as ever.
 P.M.—Pulse 98; resp. 24; temp. 102¼°.
 December 4, A.M.—Pulse 80; resp. 24; temp. 100¾°.
 " " P.M. " 88 " 36 " 102½°.
 " 5, A.M. " 88 " 24 " 100¾°.
 Patient's fæces are slate-colored.
 December 13, A.M.—Pulse 68; resp. 32; temp. 100°.
 " " P.M. " 88 " 36 " 102°.
 Cough troublesome, especially at night. Physical examination reveals evidences of bronchitis.
 December 16, A.M.—Pulse 68; resp. 24; temp. 99¾°.
 " " P.M. " 80 " 22 " 102°.
 Some desquamation of the cuticle on the hands, and the jaundice seems to have faded slightly.
 December 17, A.M.—Pulse 72; resp. 28; temp. 99°.
 Jaundice appears more marked.
 P.M.—Pulse 84; resp. 30; temp. 100½°.
 December 18, A.M.—Pulse 68; resp. 24; temp. 99½°.
 Small amount of bile in the fæces.
 December 20, A.M.—Pulse 72; resp. 22; temp. 100½°.
 " " P.M. " 84 " 30 " 100½°.
 Patient feels weak; cough very troublesome.
 December 22, A.M.—Pulse 66; resp. 27; temp. 99°.
 " " P.M. " 78 " 24 " 100½°.
 " 23, A.M. " 76 " 22 " 99½°.
 Patient's fæces this morning are of normal color, evidently bile-stained.
 December 24, A.M.—Pulse 76; resp. 24; temp. 99½°.
 December 26.—Fæces continue to be of normal color. They have been examined daily since they first became clay-colored, with a view to the discovery of biliary calculi; not one has yet been found. Patient still suffers from bronchitis; jaundice less marked.
 December 27, A.M.—Pulse 72; resp. 22; temp. 99½°.
 Jaundice markedly less. Patient vomited some greenish matter last night. A small calculus of cholesterolin was this morning found in the fæces; it had several facets, and was about one-eighth of an inch in diameter.
 P.M.—Pulse 84; resp. 24; temp. 100½°.
 December 29, A.M.—Pulse 72; resp. 22; temp. 100°.
 Patient quite comfortable; complains only of cough; expectoration quite abundant; jaundice fast disappearing.
 P.M.—Pulse 76; resp. 26; temp. 101°.
 December 30, A.M.—Pulse 72; resp. 20; temp. 99°.
 Three small calculi of cholesterolin were found in the fæces, faceted like the first.
 January 4, A.M.—Pulse 86; resp. 22; temp. 100°.
 Patient suffers from nausea; jaundice slightly increased.
 January 5, A.M.—Pulse 76; resp. 24; temp. 100°.
 Patient comfortable; no nausea; considerable cough.
 P.M.—Pulse 80; resp. 20; temp. 101°.
 January 6, A.M.—Pulse 80; resp. 24; temp. 99¾°.
 " " P.M. " 80 " 20 " 101°.
 " 7, A.M. " 86 " 24 " 101°.
 Patient coughs much; spits a greenish-brown, frothy matter; jaundice slight.
Physical examination of lungs shows dulness and feeble respiration over lower half of right lung, posteriorly.
 P.M.—Pulse 96; resp. 28; temp. 102°.

January 8, A.M.—Pulse 88; resp. 24; temp. 100½°.
 " " P.M. " 88 " 24 " 101¼°.
 " 9, A.M. " 100 " 20 " 100½°.

Patient expectorates a dark, yellowish-brown matter; crepitant râles; bronchial breathing and bronchophony over upper third of right lower lobe, posteriorly.

January 12.—Patient died.

Autopsy, thirty-eight hours after death.

Brain normal.

Lungs.—Gray hepatization of lower lobe of right lung; red hepatization of portion of upper lobe of left lung.

Heart normal.

Abdomen.—The peritoneal sac contained a large amount of flocculent serum.

Liver.—Left lobe of usual size, but tilted upwards by tympanitic condition of transverse colon. Right lobe a little smaller than the average.

Tissue.—Section shows bile-ducts in many places dilated to size of portal vein in same canal, and containing a thick mixture of bile and muco-pus. The centre of the lobules bile-stained.

Gall-bladder.—Small walls thickened and adherent to the duodenum and the transverse colon; contains two calculi of the size of marbles, faceted, and twenty-eight small ones, of the size of little peas, and also having facets. Color of these is white, except a little yellow in the centre; composition, cholesterolin, with a little bile-pigment.

The cystic duct was dilated so as to admit the little finger. The common duct and the hepatic duct were capable of holding the index-finger.

The common and cystic ducts contained twenty-two calculi, similar in appearance and structure to those in the gall-bladder. Two of these were large, slightly exceeding in size the two large ones which were found in the gall-bladder.

There was abundant evidence of catarrhal inflammation of the gall-bladder and ducts.

Spleen slightly enlarged. Capsule thickened in one portion.

Kidneys large, of deep-yellowish color, mottled with whitish spots.

Stomach and intestines appeared normal. The opening of the common duct in the duodenum was a trifle larger than usual; and just back of it was a small calculus.

The inflammatory condition of the gall-bladder and ducts above alluded to was considered sufficient to account for the high and irregular temperature, which, together with the apparent decrease in the size of the liver, seemed, early in the patient's illness, to point to acute yellow atrophy as the correct diagnosis.

Case II.—Emily B., æt. 31, intemperate, admitted December 29, 1873. Patient deeply jaundiced on admission; has been drinking hard for a week; has been in the hospital before for a similar illness after drinking; mind is clear; great thirst; liver somewhat enlarged.

P.M.—Pulse 116; resp. 34; temp. 102¼°.

December 30.—Patient about the same.

A.M.—Pulse 112; resp. 32; temp. 102°.

P.M. " 136 " 28 " 101°.

December 31, A.M.—Pulse 112; resp. 28; temp. 101°.

Patient slightly delirious; great thirst; mouth dry; tongue coated brown on upper surface; under surface and edges red; excessive jaundice.

December 31, P.M.—Pulse 120; resp. 32; temp. 101¾°.

January 1, A.M.—Pulse 120; resp. 40; temp. 101°.

" " P.M. " 126 " 42 " 101°.

Urine contains bile and abundance of albumen; reaction acid; patient has been stupid all day.

January 2, A.M.—Pulse 144; resp. 36; temp. 100°.

Patient unconscious; cannot be aroused to answer questions; lies with her mouth half open.

P.M.—Pulse 136; resp. 24; temp. 101½°.

Liver of same size as on admission.

January 3, A.M.—Pulse 144; resp. 56; temp. 103°.

" " P.M. " 144 " 56 " 103¾°.

Patient still unconscious; cannot be roused. Dr. Clark thinks she is suffering from meningitis, and that the jaundice is "an accident."

January 3, 11 P.M.—Dead.

Autopsy.—*Exterior.*—Deep jaundice; rigor mortis well marked.

Brain.—On the inner surface of the dura mater a recent exudation, fibrinous, and also an older, though comparatively recent, vascular membrane in which vessels are apparent; also, a few small recent hemorrhages.

Brain and its vessels appeared normal, save the yellow tinge to the serum as it oozed from the cut vessels.

Heart normal.

Lungs.—Small hemorrhages in the lower lobe of the right.

Liver.—One-half larger than normal; surface granular.

Section.—Marked increase of connective tissue around small spaces of lobules; tissue of lobules yellow from fat and bile; bile-ducts contained mucus and bile; gall-bladder large, contained a thin bile, and sand-like pigment concretions.

Spleen.—One-half larger than normal.

Stomach.—Catarrh.

Duodenum.—The opening of the bile-duct plugged up by a small mass of mucus; the duodenal extremity of this plug was colorless, while the end nearer the gall-bladder was bile-stained.

On removing this plug the bile flowed readily. The intestinal contents were bile-stained.

Kidneys bile-stained.

Dr. Janeway, who made the autopsy, considered death due to cholæmia, and that the brain-lesion had very little, if anything, to do with the symptoms.

EPISCOPAL HOSPITAL.

SERVICE OF DR. WHARTON SINKLER.

Reported by Dr. JAMES C. REA, Resident Physician.

CASE OF TYPHOID FEVER IN A CHILD, COMPLICATED BY INTESINAL HEMORRHAGE.

MARY T., æt. 8 years, was brought to the hospital September 17, 1873, by her mother, who left her without giving any account of her sickness. The following history was obtained two days later. For ten days previous to her admission the patient had been sick. It was noticed that she had lost her appetite, and that she was listless, and disinclined to play or move about. At the same time she began to complain of pain in her back and limbs, which was followed by diarrhœa and abdominal pain. For four or five days before coming into the hospital she had had from three to six small, slimy stools a day. At night her skin was hot, and for several nights she was flighty and wandering in her mind, without having had at any time active delirium. She had a dread of being left alone, and in the night would occasionally jump out of bed in a fright. She lost flesh and strength rapidly. On admission, the child was much emaciated, and was so weak as not to attempt to move in bed. She utterly refused to answer a question, and lay with an expressionless and rather dejected countenance, and dull eyes. Her skin was dry and shrivelled, and of a dirty-brownish color. Tongue lightly coated, but moist. There seemed to be very slight tenderness diffused generally over the abdomen. She had no appetite, and there was diarrhœa, the stools being watery, and

of a brown color. There was but little fever. Was given spt. æth. nit., and liq. amm. acetat., aa f3ss every four hours; whisky, f3i in milk every four hours, and beef-tea. At 10 P.M. she was sleeping quietly.

At 2 A.M. on the 18th the patient was found to have had a passage from the bowels of about eight ounces of almost pure blood, partly clotted and part still liquid. Acid. tannic. gr. iii, in glycerin f3i, every fifteen minutes, was prescribed. In about a quarter of an hour after the first hemorrhage she had a second, and in this she was seen to pass the blood clotted with some fecal matter intermixed. The amount of blood lost in all was almost a pint.

There was no abdominal tenderness or tympanitis, but the patient's face and extremities became icy cold, and her prostration was excessive. After two doses of tannic acid had been administered, gallic acid was given in doses of grs. v every fifteen minutes, until grs. xx had been taken, when it was given every three hours. At the same time a heater was applied to the feet, and whisky f3i in hot milk was administered every three hours, and hot beef-tea at the same intervals. In an hour she reacted, the extremities became warm, and she fell asleep.

The next day she seemed comfortable, and there was no pain on pressure over the abdomen. In the absence of any previous history of the case, and there being no fever or intestinal pain, it was extremely puzzling to know what had been the origin of the hemorrhage. Dr. Sinkler, thinking it might possibly have arisen from a polypus or an ulcer of the rectum, passed his finger into the bowel and carefully explored it; but the examination gave rise to no pain, and no polypus, fissure, or ulcer could be detected. The question of intussusception of the bowel was also considered; but the absence of pain made this condition unlikely, and no tumor could be detected on palpating the abdomen.

The fever-mixture was discontinued, and quiniæ sulph., gr. ss, with tr. ferri chlor., gtt. iv, in honey f3i, was ordered to be given three times daily. Beef-tea, milk, and whisky to be continued.

September 19.—The patient had yesterday evening a stool with no traces of blood in it. She was quiet, free from fever and pain, and took whatever was given to her, but still would not speak.

The condition of the child varied but little after this time from day to day. Her temperature was taken, and found to be normal. On the 26th, in the morning the temperature was 98°, pulse 96; evening, temperature 98°; pulse 92.

September 27.—Morning, temperature 98½°, pulse 98; evening, temperature 98¼°, pulse 96.

September 28.—Morning, temperature 98½°, pulse 100; evening, temperature 98½°, pulse 100.

September 29.—Morning, temperature 98½°, pulse 100; evening, temperature 98½°, pulse 104. The diarrhœa still continued; three or four small, yellowish stools daily. The iron and quinine were stopped, and acid. hydrochloric. dil., gtt. iv, every four hours, ordered.

October 1.—Dr. Norris took charge of the ward.

No change in the case was observed until October 5, when there was a sudden rise in the temperature. In the morning the temperature was 99°, pulse 116; evening, temperature 103°, pulse 108. There was nothing to account for this sudden and great accession of fever.

October 6.—Morning, temperature 102½°, pulse 142; evening, temperature 103°, pulse 108. She was much prostrated, and was therefore given whisky f3i every two hours, and quinine gr. i every six hours.

October 7.—Morning, temperature 102°, pulse 120; evening, temperature 103°, pulse 120.

October 8.—Morning, temperature 100°, pulse 112; evening, temperature 102°, pulse 120.

The temperature steadily fell from this time, and on

the 12th in the morning it was as low as 97°. In the evening it was 98½°. As the diarrhœa continued, bismuth, subnit. gr. x and morph. sulph. gr. ʒi, three times a day, were prescribed; and instead of the quinine, as ordered on the 6th, tinct. ferri chlor. gtt. iv, and quin. sulph. gr. ʒi, were given three times a day.

October 20.—Diarrhœa better. Two stools a day, of better consistency and more natural color.

November 4.—The patient was out of bed; had a desire for food, and was gaining strength rapidly. The diarrhœa had ceased, and she had a clear, healthy color of skin.

Discharged well November 25.

REMARKS.—The point of interest in this case was the hemorrhage which took place on about the eleventh day from the beginning of the sickness, and its being unaccompanied by any signs of pain or inflammatory action at the time of its occurrence, only a few hours after the patient's admission. The nature of the malady had not then manifested itself, but the subsequent course of the case made it clear that it was one of typhoid fever. The diarrhœa, hebetude, low delirium at times, and the long, tedious illness, together with the variations in the temperature, as shown in carefully-prepared charts, which are, unfortunately, too long to be inserted here, all point to that disease.

It is true that no rose-colored spots were seen, and that there was no meteorism; but these phenomena are not invariable accompaniments of this disease. In seven out of thirty cases observed by Hillier* there was no eruption.

Intestinal hemorrhage is not a common accident in the typhoid fever of children. Vogel† says that it and intestinal perforation are "exceedingly rare." Churchill‡ makes the same assertion, adding that M. Barrier mentions but one instance in two hundred cases. Aitken§ also states that this accident is very unusual in children. On the other hand, Hillier|| asserts that he met with it in four out of thirty cases, and Ellis¶ gives twenty-five per cent. as the proportion of cases in which hemorrhage occurs.

Another point worthy of remark is that the hemorrhage should have happened at a time when the child seemed but slightly ill, and that no severe symptoms should have set in until several days after its occurrence. Dr. Hillier remarks that although intestinal hemorrhage is generally a grave symptom, he has seen it occur in "comparatively mild cases that went on well."

TRANSLATIONS.

ABSTRACT OF A CLINICAL LECTURE ON THE EVOLUTION OF SYPHILIS.

From the French of Dr. AL. FOURNIER.**

GENTLEMEN,—As a result of actual experiment as well as a consequence of sound clinical observation, it is established to-day, and that quite definitely, that syphilis, with man at least, obeys in its evolution and general development certain fixed rules, to which, without claiming too much, we may give the name of laws.

These laws, if you will permit me to call them such,

I shall endeavor to formulate for you in the present lecture, and to justify them in your eyes by a systematic discussion.

They are as follows:

1. Syphilis is never generated spontaneously. It is always the result of a *contagion*, of an inoculation, of the material penetration into the organism of a special virulent substance.

2. The first appreciable phenomenon which results from this contagion only manifests itself after a greater or less lapse of time, constituting a true incubation.

3. The first appreciable phenomenon which results from the contagion or the artificial introduction of virulent matter into the organism manifests itself always *in the exact spot* where this matter has penetrated; in this spot and not elsewhere.

4. The primary lesion, the resultant *in situ* of the contagion, always remains isolated and solitary for a certain time, during which it constitutes or appears to constitute the only expression by which the disease is manifested.

5. It is only later that this apparently local lesion is succeeded by the manifestation of other symptoms of a multiple and varied kind, which differ essentially from the local affection in that *they are no longer localised, like it, at the point where contagion took place*, but are disseminated in all directions, spread through the entire system and susceptible of affecting all the tissues, all the organs.

Expressed thus in a dogmatic and abstract manner, these laws may seem to you obscure on certain points. A few comments will make them more clear.

Now, as to the first law. It is certain, gentlemen, that at some period in the past there must have been a syphilitic individual who did not contract the disease from some one else. How this has happened we have no idea; but one thing is no less positive, which is, that to-day such a thing does not take place, and the following proposition may be regarded as an axiom: *Whenever syphilis is acquired, it is because it has been taken from some one.*

Syphilis, in fact, in our day is not the result of individual morbid causes; it is not primarily elaborated in the economy; it is not the result of latent predisposition, of functional excess, of wearing-out organs, of deteriorating systems, of constitutional taints elaborating themselves slowly and secretly in the organism. It does not attack the patient like a pulmonary tuberculosis or a cerebral hemorrhage. No: it is always and in all cases the result of an accidental event, of an external cause, the effect of contagion.

This is beyond doubt: daily experience confirms the point, and it would be superfluous to insist upon it. But it is this, simply, gentlemen, which explains our first law.

Our second is equally simple in its meaning. Putting it into other words, we may say that a person exposed to contagion does not immediately feel the effect, but only after a more or less considerable period of time.

Take, for example, an individual exposed to contagion on the first of January, and who becomes on that day infected. Does he present immediately the first symptoms of the disease? Not at all. Will he present such symptoms on the second, the third, the fifth of January? Examine the genital organs at this time, and you will find them perfectly healthy. Will it be on the seventh or eighth? No more so. It is only much later—the fifteenth, twentieth, thirtieth of January, or possibly even subsequently—that you will perceive a morbid *something*, which in a few days becomes an evident lesion, the first sensible indication of the disease,—the "*primary lesion*" or "*chancere*."

Now, here we have a certain space of time separating the moment of contagion from that at which the

* Diseases of Children, Philadelphia, 1868, p. 338.

† Diseases of Children, New York, 1871, p. 184.

‡ Diseases of Children, Dublin, 1870, p. 848.

§ Practice of Medicine, vol. i. p. 355.

|| Loc. cit.

¶ Diseases of Children, Philadelphia, 1873, p. 88.

** Leçons sur la Syphilis, Paris, 1873.

first symptom of disease shows itself; it is this lapse of time to which the name "*incubation*" is given.

That this incubation is real and constant I can prove to you both by the results of experiment and by those of clinical observation.

Consult the facts of experimental syphilis; they will afford you the exact truth on this subject,—the result of the most strict and rigorous observation. For, by this means, the hour, even the instant, at which the virulent matter was introduced into the organism has been plainly determined, as well as the hour—the very instant, almost—when the earliest morbid phenomena first made their appearance.

Well, what do they teach us? This: that always and in all cases a more or less considerable space of time elapses between the moment of inoculation and that at which the primary lesion first shows itself.

But what is this lapse of time exactly? Observe the figures. In a single case 10 days, and in the others 15, 17, 18, 20, 21, 23, 25, 25, 27, 28, 28, 28, 29, 34, 35, 39, 42 days, which gives a mean of about 25 days.

Never, never, I insist designedly, does the primary lesion appear immediately, or the next day, or the day after, or the third or fourth from the inoculation, or even during the first week.

Now and then, indeed, some local phenomena are produced as the result of the abrasion of the skin or the introduction under it of a virulent foreign liquid; but these traumatic accidents are rapidly effaced, and it is only later that the earliest syphilitic lesion makes its appearance, after a more or less prolonged period of quiet elaboration. All observations, I repeat once more, agree on this point.

What have we here, then, gentlemen, but a mathematically-demonstrated truth?

This demonstration having been made by the irrefutable data of experiment, let us now consult those of clinical contagion.

A certain time always elapses subsequent to this contagion during which *nothing is produced*; during which the future subject of syphilis may imagine himself unharmed. This period, you will particularly notice, has the same duration as in experimental syphilis. Like the latter, it may vary in individuals, but the *mean* is the same. That is to say, this period, sometimes so short as ten or twelve days, may attain in other cases a duration of twenty, thirty, even forty days. Here, as in all virulent affections, there are unknown conditions which increase or diminish the length of incubation.

But the mean *habitual* duration is, as in the case of artificial incubation, from three to four weeks.

It is not, then, until three or four weeks after exposure to contagion that the patient observes the appearance of the primary lesion—the chancre—on his person.

Observe, then, an undoubted and very interesting fact, from which a precept may be derived that I must not fail to make you acquainted with. Frequently you will be consulted by patients who, having doubts of an adventurous coition, come to be examined by you and to obtain a clean bill of health. This is, for example, the constant history of persons from the country, who, having committed some peccadilloes in the city, hasten to a physician on the eve of their departure to know if they have anything to fear, and if they can return with all confidence to the conjugal couch.

Consulted under such circumstances, I shall suppose you to examine your patient, and to find nothing upon him. He is, at least to all appearance, perfectly sound. This fact established, what are you to say to him? Will you reassure him absolutely—give him a clean diploma? To do so, gentlemen, would be a grave fault, a culpable dereliction, which might have the most deplorable results. For, strong in your assurance, the

said consultant returns home, believing himself safe from all danger; and if, some weeks later, a slight lesion—as chancre always appears slight at first—manifests itself on his person, he takes it for an insignificant erosion, a herpes,—in fact, as something of no moment, and non-contagious, and, in consequence, exposes himself to communicate it. In this manner, doubt not, is the syphilitic contagion often transmitted in marriage. I have seen many such cases; it is the same story,—the evil done, the contagion transmitted, and lamentations on the part of the husband. "How could I have anticipated such a thing? I had not seen a woman for three, four, or six weeks. I had taken pains to have myself examined by a physician before my departure from the city, who told me *that I had nothing*,—that I was perfectly sound. It is this physician who is to blame, and not I; if he had warned me I should not have given the pox to my wife."

Do not founder upon this reef, gentlemen. Consulted in a similar case,—and you will be often,—know how to reply as you should reply, and as your knowledge of the incubation of the disease will alone permit you to reply, and say to your patient, "Yes, at present you have nothing. But syphilitic lesions show themselves *tardily*,—many weeks after contagion. Accordingly, do not believe yourself perfectly safe; observe, and if the least phenomenon, *however slight it may be*, should manifest itself, abstain, for there will be danger of contagion."

This reply will, perhaps, not be to the taste of your patient, but it will be dictated by prudence, it will be justified by a sound knowledge of the disease. And, guarding your responsibility thus, you will prevent more than once, you may be sure, the most regrettable accidents.

One word more to complete the history of the syphilitic incubation. Its duration may certainly extend beyond the average already indicated as most common. It is *often* as long as thirty days, and sometimes goes even to forty. I think I have even observed a case where it has reached two months and a half!

Putting aside extraordinary cases, we may say that now and then the incubation attains a limit varying from thirty to forty days, which is very great compared to the duration generally ascribed to it, and in flagrant contradiction to the views held some years ago by the highest authorities.

Our third law is very important, clinically. It expresses, in other words, what M. Ricord used to say, wittily: "In catching the pox, one is punished first just where one has sinned." If the penis alone is exposed, it is the penis alone that is attacked; if one is exposed by the mouth or the anus, it is at the mouth or the anus that the initial lesion is manifested.

Nurses, for example, are exposed through the breast: it is there that they frequently become affected. It is the same in other cases which it would be superfluous to cite; it is a fact of daily observation.

Experimental inoculations give the same result. Wherever the inoculation has been practised, there the first morbid phenomena are produced; always there, there only, and nowhere else.

Observe, then, gentlemen, one more truth, which I give you as demonstrated beyond all dispute.

In our fourth law we have again clinical and experimental facts concurring mutually in the establishment of a truth.

Let us take a patient who has contracted syphilis quite recently,—say a fortnight ago. What will he present? A lesion, a chancre, at the point where contagion took place. And what else? Nothing, absolutely nothing else. He has a chancre, and that is all. Examine him from head to foot; auscult him, percuss him, interrogate all his functions, and you will find

nothing else of a pathological nature about him. The chancre appears to constitute in itself alone the whole disease,* and were it not for our experience we might imagine that this patient would escape ulterior manifestations. Experimental observations give a like result.

Here, then, is an absolute rule. The local lesion of either contagion or inoculation remains during a certain period the only phenomenon by which the disease expresses itself. This period is usually from several weeks to forty-five days. But, this period passed, the aspect of things changes, and the disease tends to become generalized, as has been stated in our fifth law. After a delay of some weeks, then, we perceive certain manifestations, varied in form and seat, joined to the local lesion of contagion. Such are erosions or ulcerations of the buccal, vulvar, or anal mucous membranes, pains in the joints, limbs, etc., various lesions of the tendons, the muscles, or the periosteum, falling of the hair, and a hundred other phenomena, which I shall describe to you at another time. These new lesions, however they may differ in other respects, have all one character in common. They all differ from the primary lesion in this, that *they are not, like it, localized at the point where the contagion took place*. Far from it. The whole body seems to be their domain, and their multiplicity is only equalled by their infinite variety of forms and expressions. Affecting, or having power to affect, all the tissues and every organ, they seem to testify by their freedom of expansion a sort of generalization of the disease throughout the entire economy,—a saturation of the whole system by an infectious principle, by a morbid influence everywhere present.

To sum up, it has the power of reproducing itself everywhere, while the initial lesion has only the faculty of reproducing itself at one point. Therefore, to distinguish these later lesions from the primary one, the name has long been given them of general lesions.

Such, gentlemen, are the laws to which, in man at least, the evolution of syphilis is subject from its origin.

These laws I present you as certain, as absolute, as definitive; for they rest on the one hand upon most rigid clinical observation, and on the other upon the incontestable and undisputed facts of experiment.

A. VAN HARLINGEN, M.D.

TRANSFUSION WITH THE BLOOD OF DIFFERENT ANIMALS.

IN a recent number of the *Berliner Centralblatt*, Dr. Landois gives an account of a number of experiments performed by himself with a view to ascertaining the effects produced by transfusion or admixture of heterogeneous kinds of blood.

The blood of various mammals was injected into the veins of the frog, when it was found that within a very few moments disintegration of the mammalian corpuscles began. The length of time which was required for entire disintegration varied greatly with different animals. Thus, the corpuscles of the rabbit became dissolved in from two to five minutes, while others resisted for a greater length of time, those of the pigeon not disappearing for eighty minutes.

Under the microscope the corpuscles were seen to change in the clear frog's serum, becoming crenated and displaying active molecular movements. In a short time they became quite globular, and seemed decreased in size. Afterwards they became paler and paler, and later still only the stromata remained, which also finally disappeared.

* I do not speak here of bubo, which is, so to speak, merely an appendix of chancre.

When mammalian and frog's blood were mixed in a test-glass, the stromata of the dissolved blood-corpuscles showed a tendency to collect in masses. A certain paralysis of the lower extremities noticed in some of the animals experimented upon by Dr. Landois may, he thinks, be due to emboli formed in this way.

That fibrin may be obtained from the dissolved blood-corpuscles was shown by mixing a small quantity of defibrinated rabbit's blood with a larger portion of frog's serum, when in a short time the mixture assumed a lake color from the dissolved corpuscles, while a precipitate of fibrin floated in it.

That the serum of mammals also acts upon the blood-corpuscles of the frog was shown by injecting the serum of the dog, as free as possible from corpuscles, into the veins of the frog. The urine of the frog shortly assumed a bloody color, which remained for several days; and even after the lapse of a week albumen could be detected in the same.

In regard to transfusion among the mammalia, Dr. Landois' conclusions are as follows:

1. The blood-corpuscles of various animals disintegrate and dissolve in the blood of other species.

Under these circumstances, the previous defibrination of the injected or mixed blood is a matter of indifference.

2. The more rapidly the transfused blood-corpuscles become disintegrated in the blood of the recipient, the more quickly do they become dissolved. Thus, the blood-corpuscles of the rabbit, which are easily disintegrated, become quickly dissolved in the blood of the dog. The rapidity of this solution may be tested by the serum of the transfused blood deprived of its corpuscles, or, if the transfused corpuscles are easily distinguished by their size from those of the recipient, the microscope offers an additional means of determining the time of solution.

3. The dissolved elements attain in part the secretions, particularly the urine. A certain quantity of the dissolved material assimilates itself to the body of the recipient. If small quantities of blood are transfused, and if the disintegration of this blood takes place slowly, bloody coloration of the secretions may be absent.

4. Transfusion with heterogeneous kinds of blood may have a favorable effect in the following way: (a) as it supplies nutritive material to the recipient; (b) as it supplies the acidity of the dissolving blood-corpuscles and fluidity to the blood of the recipient; (c) as it, under certain given circumstances, improves the mechanical proportion of the circulation.

As regards the assumption on the part of the transfused corpuscles of their own peculiar physiological functions, it is scarcely worth while to remark. It must be said, however, that experience in regard to the transfusion of the blood of *closely-allied* species is wanting.

5. The duration of the discharge of bloody urine in cases where this has been observed varies within certain limits. Hæmoglobin and albumen have been detected in the urine within one hour and three-quarters after transfusion, and have in some cases remained present for twelve hours or more. In this respect the quantity and also the kind of transfused blood, as well as the functional activity of the circulation in the recipient, have an influence.

6. When an animal is transfused with blood of another kind, its own blood-cells become in part disintegrated.

Such is the case when the blood-cells of the recipient are easily soluble in the current of the received blood. Herein consists the great danger accompanying transfusions by means of rabbit's blood, the corpuscles of which are so easily dissolved.

7. In animals (as the rabbit) whose blood-corpuscles

are easily soluble, transfusion of many kinds of serum (that of the dog, man, pig, sheep, or cat) produces more or less threatening symptoms, according to the quantity injected. Increase in the frequency of respiration, dyspnœa, convulsions, asphyxia, or even death, may result.

8. Animals whose blood-cells resist disintegration, as the dog, endure the injection of other kinds of serum, as that of the sheep, ox, or pig, without any of these symptoms.

9. In rapid transfusion with large quantities of blood, disintegration of the corpuscles either of the transfused blood or that of the recipient takes place very rapidly. Under these circumstances coagulation from the precipitated fibrin may follow, and death be the result.

Experiment also shows that in many instances, instead of entire solution of the corpuscles taking place upon admixture with a different kind of blood, they simply become heaped together in masses.

When this happens, the transmission of such masses into the capillaries of the lung may give rise to the most serious symptoms.

The dangers occurring from transfusion with different kinds of blood vary, as may be seen from what has been above stated, according to the kind of animal.

As has been stated, also, many more experiments are needed in this direction in order to arrive at more certain conclusions.

Dr. Landois hopes in a future paper to give the results of further experiments in this direction, more particularly with a view to the therapeutic uses of transfusion with heterogeneous kinds of blood.

WILLIAM ASHBRIDGE, M.D.

OVARIOTOMY.

DR. FRANZ HOFFMANN reports (*Berliner Klinische Wochenschrift*) two cases of ovariectomy recently performed by him in Wiesbaden. In the first case the patient was a widow, aged 52 years, who had been married sixteen years, had always menstruated regularly, but had never borne a child. The contents of the ovarian cyst had been more than once drawn off by puncture, but finally it was determined to perform ovariectomy. On the 27th of November the patient was placed under the influence of chloroform, and the operation performed. The cyst was emptied of its contents, and, as no adhesions were found, its removal was attended with no difficulty. A double silken ligature was passed through the pedicle and tied upon either side of it. After the pedicle was cut, two arteries of considerable size were seen in the stump; and, to be still more secure against hemorrhage, the actual cautery was applied to the cut surface. Examination showed the left ovary to be sound. The stump of the pedicle was then returned into the abdomen, the abdominal cavity cleansed with spongia, and four deep and nine more superficial silk sutures introduced to unite the wound. On the 17th of December, twenty-one days after the operation, the patient passed with the stool a large piece of gangrenous tissue, upon which, however, no ligature was found. After this, the diarrhœa, from which she had suffered for some time, ceased, and the patient improved rapidly and was able to leave her bed on the 21st of the same month. For a long time there was a painful induration in the region of the sigmoid flexure of the colon, which slowly disappeared; and now, eighteen months after the operation, the patient is in perfect health.

The patient in the second case was a married woman, aged 28 years. She had been married a year, was of good constitution, though somewhat reduced in flesh; and her menstrual functions had always been normally

performed. She first noticed the swelling of her abdomen at Easter, 1872, and in December of the same year tapping was performed, and about twenty-one litres of fluid drawn off. The operation of ovariectomy was performed on the 26th of February, 1873. The operation was performed as in the other case, but, as some adhesions of moderate strength were found, more time and skill were required in extracting the cyst from the abdomen. The scalpel had to be used to separate some of the adhesions; and when these contained vessels the catgut ligature was applied and cut off close to the knot. The pedicle was cut, and in this case secured with a ligature of iron wire drawn through Koeberle's *serre-nœud*. The pedicle was drawn to the lower angle of the wound and secured, and the wound closed. The menses appeared twenty-two days after the operation, and, as has been frequently noticed, a small hemorrhage took place from the granulating end of the pedicle. On the twenty-seventh day the patient left her bed, and was discharged cured on the thirty-ninth day after the operation. At present—three months have elapsed—she is in good health, and stronger than before the operation. Dr. Hoffmann feels much better satisfied with the treatment of the pedicle adopted in the latter case, and thinks that the probability of its becoming encapsulated when ligated and returned into the abdomen is not great, as would be supposed from the results obtained in experiments made on animals. The results obtained from the carbolyzed catgut ligature in the abdomen were very satisfactory.

WILLIAM ASHBRIDGE, M.D.

ELIMINATION OF PHOSPHORIC ACID.

E. MENDEL (*Archiv f. Psych. und Nervenkrankh.*, 1872) has observed—1. That the amount of phosphoric acid excreted during nine hours of night is less than that excreted during the remaining fifteen hours of the twenty-four, but that the hourly amount is usually greater during the night. 2. That in patients affected with lesions of the brain of long standing, as a rule, the amount of phosphoric acid excreted is, both absolutely and relatively to the remaining solids excreted, less than that found in the excretion of healthy persons upon the same diet. 3. That in cases of maniacal excitement the phosphoric acid in the secretions is diminished both relatively and absolutely, while it is increased after apoplectic and epileptic seizures. He also noticed that after sleep had been induced by the use of hydrate of chloral or potassii bromidum a marked increase in the amount of phosphoric acid excreted took place.

WILLIAM ASHBRIDGE, M.D.

BACTERIA IN THE BLOOD.—It is now pretty generally agreed that Bacteria are almost invariably present in the blood: therefore the following record is not so surprising as it might have been a few years ago. It seems that Dr. Eberth states (in *Centralblatt*, No. 20, 1873) that he has found in ordinary sweat, as well as in yellow sweat, small oval-shaped Bacteria, which are frequently united in strings of two or three, and endowed with rather active movements. In spots covered with hair they attach to it and often form thick layers; whilst others penetrate into the hair, which then splits and breaks. Coloring by means of hæmatoxylin brings out the isolated Bacteria, as well as those collected on the hair. The author thinks that they very likely contribute to produce certain chemical modifications of sweat.—*London Monthly Microscopical Journal*, January, 1874.

PHILADELPHIA MEDICAL TIMES.

A WEEKLY JOURNAL OF

MEDICAL AND SURGICAL SCIENCE.

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EDITORIAL.

CHANG AND ENG.

IN *Lippincott's Magazine* for March is an account of a visit to the original home and to the parents of the Siamese Twins. The latter, it appears, were born some thirty miles southwest of Bangkok; their father being a Chinaman, their mother a native of Siam, bred by a Chinese father. The twins were, therefore, three-fourths Chinese, and were known in their native home as the "Chinese Twins." They were the first-born sons of their parents; but their mother has presented her husband with four other pairs of twins and four children born at single births,—all of them normal and healthy. Their mother, during their infancy, entirely recognized their separate individuality, and also the fact that there existed a common sensibility in the centre of the band. She stated, what is undoubtedly true, that at first the ligament was so short that the boys were compelled always to be face to face; even in the bed they could not turn without being lifted up and placed in the desired position. As they grew, the ligament seemed gradually to stretch, until they were able to stand side by side, and even back to back, and to turn themselves in bed by rolling one over the other. The father being a fisherman of the laboring class, the boys lived in one of the floating houses of the country, and soon became famous swimmers, spending much of their time in the river. It was the peculiarity of their movements in the water which first

attracted the attention of a Scotch merchant, Mr. Robert Hunter, and finally led to their leaving their native country in quest of fortune.

Altogether, the history of their life is a very strange one,—commencing in a Siamese sampan, ending in the backwoods of North America,—a life beginning in the utter obscurity of a fisherman's hut, passing out amidst such noise and notoriety as falls to the lot of only one mortal in ten millions.

OWING to the unavoidable haste in preparing the number of this journal which was devoted to a consideration of the Siamese Twins, there occurred the following errata:

Dr. Pancoast was incorrectly reported as using the expression *Omphelopagus Xiphodidymus*, as applying to the monstrosity under consideration. The term which he employed was *Omphaloxiphodidymus*.

On p. 324, Dr. Allen should have been quoted as saying, "On the posterior side there was a fold underneath the skin extending from a *central point in the abdomen* of Chang," and not "from the ensiform cartilage."

WE have long suspected that the French "con-cours" system is in practice not so perfect as some of its supporters claim. It is very conceivable that a most distinguished originator of new ideas, and a most learned man, might not be so ready as a really less able but an intellectually more agile opponent, and might not under pressure shine so much as the lesser light. The fuel that blazes quickest and fiercest does not always contain the most heat-power. Speaking of the opening address of the newly-chosen professor of the history of medicine at Paris,—M. Lorain,—the correspondent of the London *Lancet* says,—

"The influence of physiology was forcibly shown, and in connection therewith the lecturer expressed his regret that the School of Medicine and the Paris hospitals had not secured a man like Claude Bernard, who, like many others, had found it impossible to submit to the 'corset' of public competition."

WE desire to call the attention of the Fellows of the College of Physicians to the fact that the Journal Association is very much in need of funds. In the absence of Dr. Bache, subscriptions may be paid at the college or to the authorized

agent, who will call upon the Fellows. The continuous success of the enterprise is a *necessity* for the growth of the college. There are, at present, thirty-six periodicals subscribed for by the association, of which twenty-seven are European. These are in addition to those taken by Dr. Lewis and by the college, so that the whole makes a very complete list. The objects of the association are briefly explained in their annual circular, as follows:

"Objects.—1. To obtain for the use of the Fellows medical journals *promptly*, as the numbers are issued.

"2. To increase the College library.

"The journals are placed on the table in the library as soon as received, and there remain, accessible to the Fellows, until a volume is completed, when it is turned over to the library and becomes the property of the College. In 1873 thirty volumes were thus given to the library."

OUR LEARNED COTEMPORARIES.

WE see from our homœopathic exchanges that Dr. Hering has discovered that the conjunctions and disjunctions of the moon and the sun are potent in their influences upon the actions of remedies, and Dr. Morgan has found that Jupiter is but little less powerful. Evidently a slice of the Middle Ages has been projected into our midst, and once more astrologers and physicians will be like the two single gentlemen of the poem,—rolled into one. Dr. Hering will be happy to furnish monthly tables to any who may desire astrological guidance.

PROF. A. L. CLINKSCALES asks in *The Archives of American Medicine and Surgery* (eclectic), "Where and what are we?" We don't wonder at an eclectic editor asking this: we think only inspiration could answer it.

"Home went the little woman, all in the dark;
Up got the little dog, and he began to bark;
He began to bark, so she began to cry,
'Lawd a mercy on me, this is none of I!'"

PROCEEDINGS OF SOCIETIES.

PHILADELPHIA COUNTY MEDICAL SOCIETY.

DR. W. B. ATKINSON, PRESIDENT, in the chair.

A CONVERSATIONAL meeting was held December 10, 1873, at 8 o'clock P.M.

The presentation of books, specimens, etc., being in order, Dr. BENJAMIN LEE presented to the library of the society a volume entitled "The Mechanical Treatment of Disease of the Hip-Joint," by Dr. Charles Fayette Taylor, Surgeon to the New York Orthopædic Dispen-

sary and Hospital, etc., etc. The work, Dr. Lee said, was, as its preface stated, strictly confined to the subject indicated by its title,—the mechanical problem involved in the distortions resulting from inflammation of the hip-joint, and the mechanical appliances necessary to relieve them. It did not pretend to enter into the broad field of pathology or of general treatment. It contained, of course, a careful description in detail of the author's apparatus or splint for producing extension without interfering with locomotion, which, like all hip-splints, was a modification of the original Davis's splint; its principal features being that its lower extremity rested on the ground, and was quite independent of the shoe. The chief merit of the book, however, Dr. Lee thought, was to be found in the fact that its author proposed to divide the process of overcoming the muscular contractions which form so serious a complication in the disease, into two distinct stages, founded upon the order in which these contractions take place. In so doing he was carrying out, perhaps unconsciously, the idea so happily suggested by William Adams, of London, in regard to the treatment of the contractions in talipes varus. This gentleman proposed to reduce the compound distortion to the simple form of equinus, by first overcoming the lateral distortion through the transverse tarsal articulation, and then dealing with the contracted gastrocnemius and the deformity of the ankle-joint proper.

Dr. Taylor's proposal in regard to the compound contractions existing at the upper part of the thigh, which he had already for some time put into successful practice, was to overcome, first, the contraction of the adductors, inasmuch as they are the last to become shortened; and, after we had entirely succeeded in accomplishing this object, to direct our attention to stretching the contracted flexors, but not until then. His mode of procedure was described by Dr. Lee as follows, the demonstration being illustrated by means of a portion of a splint which he had already had in use, and which differed from Dr. Taylor's in but slight modifications. Any one seeing for the first time a patient with disease of the hip-joint, lying on the back, with the limbs side by side upon the bed, both equally flat, would conclude upon a cursory examination that there could not be any contraction at the hip. If, however, he should pass his hand under the back, in the lumbar region he would at once perceive that the spine was arched up to a much greater extent than is natural, and that only by drawing up the affected limb to a considerable angle with its fellow could the spine be brought down to its proper position. Dr. Taylor, before applying his splint, places the limb upon an inclined plane adjusted carefully at exactly this angle, so that there shall be no spinal distortion. The sound limb being in the line of the axis of the body, the affected limb lying upon its inclined plane probably crosses it below the knee. The splint is then put on, and slight extension made. At the same time a powerful screw, acting upon the hip-band of the splint, throws its lower end out from the median line, thus acting against the contracted adductors, as the hip-band is held firm by a perineal strap upon the opposite side. To complete this process of relaxation occupies from a few hours to ten days; and until it is fully completed, the efforts must not be intermitted or relaxed. Having accomplished it, however, the inclined plane is slowly lowered, and the flexors, being now alone in maintaining the deformity, yield with its descent, until the limb is on the plane of its fellow and the pelvis at its natural inclination to the femur. The patient is then allowed to assume the erect posture and to attempt locomotion. By thus methodizing the extension, the author claims that a resort to tenotomy will very rarely be necessary. This idea Dr. Lee considered to be entirely new so far as the

hip-joint was concerned, and to give the book sufficient value to entitle it to a place upon our shelves.

Dr. P. D. KEYSER presented a specimen sent him by Dr. SCHITTLER, of Jefferson, Wisconsin, of the larva of the *Eristalis tenax* (the rat-tail fly), which was removed alive from the nostril. Dr. Schittler sent it October 4, 1873, and wrote that about six or seven months previously Mrs. Marsue, of Jefferson, came to him complaining that something was the matter with her nostrils; she was sure that something living was inside of them, as she could feel it moving about slowly from place to place. By careful examination with reflected light and a speculum, nothing but a hypertrophied condition of the mucous membrane lining the canal could be seen. He ordered her a nasal douche of carbolic acid solution, but without any permanent effect. After four weeks' treatment she left him, but continued using different innocent washes, until October 1, when she returned again, begging him to make a more thorough examination, as she could very distinctly feel the worm creeping about, at times going back towards the Eustachian tube, and then forward again. He again examined her, without discovering anything but the former condition, and again ordered injections of carbolic acid solution. On the 4th of October she again returned, and besought him to examine, as she felt the thing was quite in the front of the canal. On examination, to his surprise, he saw and drew out with forceps a worm about half an inch long, with a tail of the same length. He put it in water, and it swam about actively, with the tail erect. The same evening, at 10 P.M., he put it in a small vial containing alcohol and glycerin, and sent it by mail to Dr. Keyser for examination. After making a microscopical drawing of it, Dr. Keyser took it to Professor Joseph Leidy, who pronounced it to be the larva of the *Eristalis tenax*. It must have been snuffed up the nose from using water in which these larvæ were, and has continued to live in this state without transformation this length of time. There are certain peculiar conditions which prevent the transformation of larvæ into the insect, and this may have been the case in this instance, as this insect has never been known to be a parasite to man.

Dr. O'HARA stated that he had recently treated a compound fracture of the thigh in which there was shortening of one inch. He desired to ask the surgeons present what would be called a common and good cure.

Dr. D. HAYES AGNEW replied that fractures of the thigh were rarely cured without appreciable shortening. If the shortening did not exceed half an inch, or even three-fourths of an inch, the cure was not a bad one. Such fractures are rarely transverse, but oblique, at least in civil practice. In children better results as to length are obtained, but not what may be termed perfect.

Dr. W. L. ATLEE could see no reason why the limb, three hours after the fracture, could not be reduced to its original length by extension and counter-extension, under the influence of an anæsthetic. Had sufficient time elapsed after the accident for inflammation to be established in the injured parts before an attempt at extension was made, he could understand the difficulty. His remarks applied only to the first efforts at extension, and not to the result of subsequent treatment, which rarely accomplishes a perfect cure.

Dr. STETLER thought an impacted fracture might account for the difficulty in Dr. O'Hara's case.

Dr. LEE asked Dr. O'Hara whether he concluded that there was shortening of the femur because the heel of the affected side could not be brought down to the same point as that of the sound side, or from actual demonstration of overlapping of the fragments at the seat of injury, or from measurement of the femur from trochanter to external condyle. If the first indication

were relied upon solely, might not the shortening be due to dislocation upwards of the head of the femur, which the gravity and urgency of the principal lesion had caused to be overlooked?

Dr. O'HARA said there was no dislocation.

Dr. G. KERR then read a paper on the "Use of Alcohol Medicinally and Socially."

Dr. B. LEE said that he felt that it did us, as members of the medical profession, no harm to have the subject which had been discussed this evening brought to our attention from time to time, and that when one of our own number offered us a word of exhortation and of caution in this regard it behooved us to receive it with a good grace, and to give the matter thoughtful consideration. Alcohol is certainly a two-edged sword. When it fails to cure it may kill, and we cannot hedge in our exhibition of it with too many precautions. He must say, however, that the paper presented this evening was, to his apprehension, more of the nature of a temperance lecture than of a scientific essay. The subject had not been treated in that spirit of fair, searching, discriminative investigation which would enable us to discuss it intelligently. The author had referred in the course of it to the writings of two distinguished English physicians and physiologists,—Carpenter and Anstie. The former of these has been for years the bright and shining light of that school who desire to show that alcohol can never be of any possible use to the human body, the result of his experiments being, in his own view and that of his followers, that all the alcohol taken into the body is rejected by it in the various excretory processes, and that it is therefore evidently regarded by the tissues as simply an intruder, and a poison. These experiments have, however, been completely overturned by later investigators, and by none more completely than by Anstie, whom the lecturer has quoted approvingly on one side of the question, while his views on the opposite side have been passed over in silence. His recent experiments led him to the conclusion that a healthy adult man can appropriate two ounces of alcohol in the course of twenty-four hours, no trace of which or of its constituents can be found in his excreta. We must conclude, then, that it has undergone a conversion into tissue, and therefore is to be regarded in the light of a food.

Dr. J. G. STETLER asked Dr. Kerr what substitute besides "Schuylkill water flavored with Knickerbocker ice" he proposed giving the American Medical Association in the place of alcohol.

Dr. F. J. BUCK thought there ought to be a law which would allow friends to confine habitual drinkers as insane, on certificate.

REVIEWS AND BOOK NOTICES.

A HANDBOOK OF THE THEORY AND PRACTICE OF MEDICINE. By FREDERICK T. ROBERTS, M.D., B.Sc., M.R.C.P. Philadelphia, Lindsay & Blakiston, 1874.

Dr. Roberts has succeeded admirably in the performance of a very difficult task,—the condensation into a moderate-sized volume of the main facts connected with the pathology, symptomatology, and treatment of disease,—and in doing so he has produced one of the most satisfactory medical handbooks in the language. He states modestly in his preface that the work is intended mainly for the use of students, and that its object is to present in one volume such information on the principles and practice of medicine as shall be sufficient to prepare them for their various examinations, and also to guide them in acquiring that clinical knowl-

edge which alone can properly fit them for assuming the active duties of their profession. Judged by this standard, it is not just to complain that the book is not so lucid and comprehensive as Flint, so entertaining as Watson, or so scientific and copious in its pathology as Aitken, but we should simply inquire whether its object has been accomplished, and whether it supplies a recognized deficiency in medical literature. In the first place, the general arrangement of the work is excellent, both for convenience and ready reference, and for the systematic study of disease. Before entering upon the consideration of the affections of any special organ or sets of organs, a general outline is given of the clinical phenomena which indicate a morbid condition of those parts, with a summary of the symptoms and physical signs presented by each under varying circumstances. The remarks on diagnosis, prognosis, and treatment are clearly and concisely generalized.

The first section, on the etiology and semeiology of disease, while it might perhaps have been omitted without lessening the value of the work to the general practitioner, yet contains many valuable hints to students on matters which they are too apt to overlook.

In the second section are considered certain morbid conditions of which it seems desirable to have a comprehensive knowledge before studying them in connection with special diseases. These include congestion, dropsy, hemorrhage, inflammation, pyrexia, etc.; and, without entering into any minute histological disquisitions, the subjects have been fairly brought up to the level of the present day.

The third section is devoted to the consideration of individual diseases and their clinical investigation. The faults throughout this portion of the book are, as in every compend, chiefly those of omission.

Under scarlatina there is no mention made of atrophy of the optic disks as a sequel to that disease, although it is not infrequent and is of great importance. In the article on gout very little is said about the employment of mineral waters, and no distinction is drawn between their different varieties. In the very brief mention which is made of gonorrhœal rheumatism, there is no allusion to the idea that the disease may be of pyæmic origin. In discussing the treatment for tænia, the author does not allude to the use of pumpkin-seed, although that was long ago proven to be a valuable and reliable remedy in such cases. Under dysentery, there is no mention made of injections of ice-water or of chlorate of potassium; both, it seems to us, deserving of a passing notice.

In the article on sunstroke, there is evidence of a want of familiarity with American authorities on that subject.

These are, of course, but trifling and excusable errors, and, although their enumeration might be prolonged, the foregoing will serve as sufficient examples.

The introductory remarks to the diseases of the circulatory organs are particularly lucid, and will doubtless help many to a clearer understanding of the somewhat complicated subject and of the physical symptoms apparent in these affections.

The diseases of the lungs and pleuræ are excellently discussed, and perhaps constitute the most praiseworthy portion of a work which is very creditable to its author, and which is likely to be of great service both to students and to practitioners.

LECTURES ON THE CLINICAL USES OF ELECTRICITY. By J. RUSSELL REYNOLDS, M.D., F.R.S. Second Edition. Philadelphia, Lindsay & Blakiston.

We are glad to see a second edition of this little manual, which, to our thinking, for students and for general practitioners is simply the best book in the language upon the subject of which it treats. Clear, concise, containing pretty much all that is worth know-

ing, it is singularly free from the farrago of fallacies and nonsense which encumber so many treatises upon electricity. We greatly fear that the edition is a pirated one, and only wish medical public opinion was strong enough, in the absence of a copyright law, to make self-interest and justice synonyms in the American publishers' dictionary.

AN INTRODUCTION TO PHYSICAL MEASUREMENTS, WITH APPENDICES ON ABSOLUTE ELECTRICAL MEASUREMENTS, ETC. By DR. F. KOHLRAUSCH. Translated from the Second German Edition by THOMAS HUTCHINSON WALLER, B.A., B.Sc., and HENRY RICHARDSON PROCTOR, F.C.S. New York, D. Appleton & Co., 1874.

A very learned book, a very abstruse book, which we fear will not be appreciated by the medical profession. Indeed, the only part of any possible interest to physicians is that which treats of the absolute measurement of electric force. A glance over its abstruse formulæ has convinced us that a modification of Laplace's saying to Mrs. Somerville may be applied to the physician who reads them: "You and Miss Fairfax are the only woman who has read my *Mécanique Céleste*."

THE MICROSCOPIC STRUCTURES AND MODE OF FORMATION OF URINARY CALCULI. By H. VANDYKE CARTER, M.D. Lond., with Illustrations. 8vo, pp. 51. London, J. & A. Churchill, 1873.

This brochure is a praiseworthy effort in a field not explored, systematically at least, previous to the labors of Dr. Carter. Much valuable information, liberally illustrated, is added to our knowledge of the physical and chemical composition of calculi.

Dr. Carter believes that the microscopic analysis of urinary calculi is "not only more valuable, but that it is even more delicate, than the chemical method," and by its aid is still more clearly shown than before that "no single urinary deposit long occurs alone." That this fact is beautifully confirmed by microscopic examination is true; but microscopic analysis cannot be said to be more certain than chemical analysis, the well-determined facts of which are beyond dispute, and the fact of the mixed composition of urinary calculi has long been one of these. To be able to *confirm* chemical results is, however, sufficiently good work for microscopical inquiry; and in this respect Dr. Carter has done very valuable work.

We had hoped to find, as the result of Dr. Carter's researches, some more certain indications than we now possess of the exact nature of existing calculi, from a study of the microscopical and chemical characters of the urine; but we regret to find nothing more definite than heretofore. The difficulty in the dispersion of calculi by chemical means is explained by the large amount of animal matter always present, which, when the salts are removed by solution, remains behind in the shape of a stubbornly insoluble membranous matrix.

LECTURES ON BRIGHT'S DISEASE, WITH ESPECIAL REFERENCE TO PATHOLOGY, DIAGNOSIS, AND TREATMENT. By GEORGE JOHNSON, M.D., F.R.S., Fellow of the Royal College of Physicians, Professor of Medicine to King's College Hospital, etc. 12mo, pp. 152. New York, G. P. Putnam's Sons, 1874.

Anything from the pen of Dr. Johnson on the subject of Bright's disease is welcome. A pioneer in the true pathology of the subject, it is pleasant and useful to read his views as confirmed or enlarged by the result of many years' experience and study. The present volume, dedicated to his past and present pupils, is a reprint of some lectures published during the past year in the *British Medical Journal*, and may be said to represent his present views. These have not materially altered from those presented many years ago in his

larger volume, but are presented in a form easily available to the busy practitioner. When we say that in both pathology and treatment he more nearly approaches than any other author what we conceive to be the correct notion, and that the practitioner and the student will find all that is essential to guide him to the most successful treatment possible of Bright's disease, we feel that we have said all that is required.

GLEANINGS FROM OUR EXCHANGES.

THE VALUE OF TENOTOMY OF THE TENSOR TYMPANI MUSCLE.—At the annual meeting of the American Otological Society in 1873, Dr. R. M. Bertolet read an interesting and instructive paper upon the above subject. He believes that the operation is bound to become one of the most important remedial measures at the disposal of the aural surgeon, when the comparative simplicity and harmlessness of the procedure are more generally recognized, the indications more clearly enunciated, and when it is not resorted to merely as a *dernier* measure. The precise process leading to rigidity and shortening of the tensor tympani muscle is not yet determined. The patient's history is generally one of progressive difficulty of hearing, with tinnitus aurium, fulness in the ears, vertigo, etc. The membrana tympani is seen to be unusually concave; frequently the promontory is seen shining through the membrane, and the handle of the malleus is drawn inwards so as to appear foreshortened.

Dr. Bertolet gave the following table of sixteen cases in which the operation had been performed:

No.	Sex.	Age.	Ear operated upon.	Duration of the affection in years.	Hearing, distance for which before the operation.	Hearing-distance after division of the tendon.	Remarks.
1	F.	45	L.	7	Contact.	.....	Only temporary cessation of the tinnitus.
2	M.	50	L.	8	o	Contact.	Cessation of the noises.
3	M.	50	R.	8	6"	.....	Cessation of the noises.
4	M.	41	L.	5	o	.....	Otitis media purulenta set up.
5	M.	39	R.	2	o	12"	Complete cessation of the noises.
6	F.	28	L.	years?	Contact.	.....	Resulted in a purulent inflammation of the middle ear.
7	F.	28	R.	years?	o	.....	.....
8	M.	60	L.	3	Contact.	Contact.	Diminution of the tinnitus.
9	F.	19	R.	2	2"	36"	Entire subsidence of the tinnitus in both ears.
10	F.	19	L.	2	3"	36"	.....
11	F.	47	L.	4	o	Contact.	Diminution of noises, eventually worse.
12	M.	36	L.	3	Contact.	Contact.	Noises disappeared in both ears.
13	M.	36	R.	3	1"	1"	.....
14	M.	62	L.	12	o	o	Noises greatly diminished.
15	M.	62	R.	12	o	o	No improvement.
16	F.	47	R.	4	1"	1"	Noises only slightly relieved.

CASE OF ACARDIA (*New York Medical Journal*, February, 1874).—Dr. Lusk reports a case of twin pregnancy,—labor occurring in the seventh month,—in which the birth of the first child was followed thirteen hours later by the delivery of an acardiac monstrosity, weighing three pounds and nine ounces. The lower extremities as far as the feet were well developed. A loop of intestine protruded from the umbilicus. The upper portion of the foetus consisted of two globular

sacs, composed of skin, which was greatly hypertrophied, and through which a distinct fluctuation could be made out. There was a small bunch of hair at the upper junction of the sacs. The cervical, dorsal, and lumbar vertebrae were complete, but the sternum was absent. There were no traces to be found of either heart, lungs, stomach, pancreas, liver, or spleen.

The accepted theory of the origin of this monstrosity is as follows. The acardia is always one of twins. Both children are developed from the same ovum, are of the same sex, and are contained in a single chorion. There is a single placenta, but two capillary systems, which communicate. Sometimes, by means of large connecting vessels, the two foetal circulations in the placenta form a more intimate union with each other. Then, in case each foetal heart beats with equal intensity, the result would be an arrest of the circulation in the communicating branches, with the formation of thrombus. When the heart's action in one foetus counterbalances that in the other, the stronger blood-current in the placenta would push back the weaker one, at first impeding the circulation of the latter, then arresting it, and finally causing it to take an inverse direction. The heart then atrophies, and, the force not being sufficient to carry the blood-current to the upper parts of the body, they are consequently not developed.

FRACTURE OF THE SKULL, WITH CHRONIC ABSCESS (*Edinburgh Medical Journal*, December, 1873).—Dr. James More reports the case of a young man who was injured by the bursting of a gun. When seen, he was sitting quietly by his fireside, apparently not much the worse for the accident. There was a stellate wound right in the middle of the frontal bone, about the size of a garden pea; there was no pain, and little or no hemorrhage. On the introduction of a probe, fracture of the bone was found, and the probe went easily and straightly into the substance of the brain. He was ordered perfect quiet, a mild aperient, and milk diet. At the end of a week he felt and seemed quite well, and remained so for two months. In about ten weeks, however, he began to complain of headache, slight sickness, and giddiness; his temperature became irregular, and he had exophthalmos, with enormously dilated pupils. He became profoundly comatose, and died just thirteen weeks after receipt of the injury. At the post-mortem examination a small canal was found leading antero-posteriorly from the frontal wound into an abscess. The latter was the size of an orange, and was situated just above the right ventricle, the roof of which formed the floor of the abscess. The meninges in the neighborhood were thickened, but otherwise the brain and all its coverings were healthy.

A TEST FOR CARBOLIC ACID (*Journal of Applied Chemistry*, February, 1874).—Plugge has observed that when a solution containing carbolic acid is mixed with a solution of the subnitrate of mercury, not only is the mercury reduced, but the liquid acquires an intense red color. Further experiments showed that the presence of traces of nitrous acid was essential to this reaction, and that it could be employed as a test for carbolic acid. He found that the color was still quite evident when only one sixty-thousandth part of carbolic acid was present. Still smaller quantities could be detected by this test if carefully applied, but the amount of nitrous acid must be very small.

PRECOCIOUS MENSTRUATION (*American Medical Journal*, February, 1874).—Dr. A. F. Deniston reports the case of a female child in whom the menses first made their appearance at the age of twelve weeks and have since recurred with unfailing regularity. The girl is now eleven years of age; her breasts are fully developed, and she appears much older than is natural.

MISCELLANY.

THE WOMAN QUESTION VIEWED CHEMICALLY.—“She is large, ruddy, and plump, a good-looking, strawberry-and-cream woman, but one of these negative ones,—a perfect *Pulsatilla* case,” said Mrs. Dr. —. The above suggested the following train of thought: “Fleshy and negative,” then lean and positive, must be the other extreme. There is an idea for you. But is it a fact? If so, let us see where it leads us. Woman is more fleshy than man. Woman is negative; man, as a rule, is positive. Women are not as fleshy as they were formerly, therefore they are more positive. American women are the leanest of the lean, therefore American women are the most positive, *i.e.*, the most strong-minded and aggressive, or, in other words, more masculine-like, and less womanly, and of necessity less motherly. If that is so, then the Turk who fattens his women with bread and honey is a sage and a physiological philosopher. His women are fat and contented, and peace reigns in his harem. Then the triumph of the woman question turns upon a little more acid. Fat is negative and alkaline; lean is positive and acid. Sweets, starch, and fats are fattening, while acids, stimulants, and spices take off fat. Quiet and water increase the fat, while activity takes it off. Now, there is a hint for the women who would be “man’s equal,” *i.e.*, equally positive. Agitate, stir up the sisters, condemn bonbons, insist on a little more pickles and all the spices you can get, and do not object to tobacco (smoke) and (bay) rum. What a ray of hope for hen-pecked husbands! How they can quietly and effectually flank and subdue the turbulent element with sweets, soups, fish, and a little more mutton. There is, however, a large, intelligent, and growing brain that cannot thus be subdued, and, thank the Lord, these are “too wise to err and too good to be unkind.”—*The Medical Investigator (Homœopathic)*.

IS SULPHATE OF MORPHIA INCOMPATIBLE WITH COMPOUND SPIRIT OF ETHER?—A writer in the *Druggist’s Circular* says, “A short time ago I prepared the following prescription:

R Sulphate of morphia, 3 grains;

Compound spirit of ether, 2 ounces.

Mix. Dose, a teaspoonful at night.

“About two weeks afterwards the bottle was returned; there was about a quarter of an ounce of liquid left in the vial, and I noticed it was full of small crystals of morphia. I made a solution of sulphate of morphia in alcohol, and kept it two days without any change intervening, when, a small quantity of ether being added, the whole of the sulphate of morphia crystallized out in the space of twenty-four hours. Had the patient taken the last dose, with all the crystals in it, the result would have been quite serious.”

EASTERN HONORS TO AN AMERICAN SURGEON.—According to the *Lynchburg Republican*, Dr. Edward Warren is extremely successful in Cairo. It says he

is at present chief surgeon to the staff, ranking as colonel, with a salary of \$300 a month, and the privilege of practising his profession. The doctor had treated the Minister of War for a disease after he had been given up to die by the physicians of Cairo, and the patient recovered, which was looked upon as almost a miracle. He was officially thanked for saving the minister’s life. The viceroy issued an order making the doctor a Bey, and giving him a decoration, and he has since been overrun with practice.

NOTES AND QUERIES.

KENTON, OHIO, February 28, 1874.

TO THE EDITOR OF THE PHILADELPHIA MEDICAL TIMES:

Can you inform me in what manner croton chloral is used—whether dissolved or in powder, or in what does it dissolve—and also its dose? An answer to this would be a favor.

Very truly yours,
C. H. SMITH.

Answer.

Croton chloral is to be given in doses of from ten to twenty grains, dissolved in syrup; in poisonous properties it is *probably* about equal to chloral.

TO THE EDITOR OF THE PHILADELPHIA MEDICAL TIMES:

In the number of the *Richmond and Louisville Medical Journal* for October, 1873, a writer speaking of lithotomy says, “The records show a greater percentage of success in it by a Kentucky surgeon, even to this day, notwithstanding all the modern improvements. I speak of Dr. Benjamin F. Dudley, of Lexington.” I have heard the same thing claimed for Prof. Paul F. Eve, of Nashville, Tenn. Which of these claims is correct? Am I wrong in thinking Prof. Gross has attained at least as high a percentage of success as either of these gentlemen? By giving me the required information, and the statistics of the operation, through the columns of the *Medical Times*, you will greatly oblige

A YOUNG SURGEON.

Answer.

We would be obliged for an answer from some surgical subscriber.

OFFICIAL LIST

OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U.S. ARMY, FROM FEBRUARY 10, 1874, TO FEBRUARY 23, 1874, INCLUSIVE.

EDWARDS, L. A., SURGEON.—Leave of absence extended fifteen days. S. O. 29, Military Division of the Atlantic, February 16, 1874.

GHISELIN, JAMES T., SURGEON.—Relieved from duty as Attending-Surgeon at Portland, Oregon, to enable him to avail himself of his leave of absence. S. O. 18, Department of the Columbia, February 4, 1874.

RANDOLPH, JOHN F., SURGEON.—Assigned to duty as Chief-Surgeon with troops under orders for field-service in the vicinity of Fort Laramie, Wyoming Territory. S. O. 22, Department of the Platte, February 14, 1874.

HEITZMANN, C. L., ASSISTANT-SURGEON.—Assigned to duty with troops under orders for field-service in the vicinity of Fort Laramie, Wyoming Territory. S. O. 22, c. s., Department of the Platte.

ROSE, GEORGE S., ASSISTANT-SURGEON.—Assigned to temporary duty at Yuma Depot. S. O. 11, Military Division of the Pacific, February 9, 1874.

CLEARY, P. J. A., ASSISTANT-SURGEON.—To report in person to the Commanding-General, Department of the Missouri, for assignment to duty. S. O. 34, A. G. O., February 16, 1874.

WIGGIN, A. W., ASSISTANT-SURGEON.—Detailed temporarily for duty as Attending-Surgeon at Portland, Oregon. S. O. 18, c. s., Department of the Columbia.

SATURDAY, MARCH 7, 1874.

ORIGINAL COMMUNICATIONS.

CASE OF SMALL ROUND-CELLED SARCOMA.

BY CHARLES B. NANCREDE, M.D.,

Assistant-Surgeon P. E. Hospital.

THE patient, Lizzie H., æt. 13 years, first complained of pain in the right side of the thorax, which ceased within forty-eight hours, and then recurred only after the lapse of two or three weeks. On examination by her mother, a small tumor, the size of a hazel-nut, was found about the middle of the outer surface of one of the lower ribs, probably the seventh. I first saw the patient on November 14, 1872, at the University of Pennsylvania, where I was then acting as Dr. Strawbridge's chief of clinic. She then had diplopia, owing to paralysis of the external rectus of the right eye, and also suffered from pains over the right brow and side of the head. The diagnosis then made was that of intracranial tumor, compressing the right abducent nerve. At a subsequent visit, she complained of "the lump in her side,"—now increased to the size of a hen's egg,—which was diagnosed by Prof. Agnew, Dr. W. F. Norris, and others, as probably being an enchondroma of the ribs, accompanied by a secondary deposit at the base of the brain, causing the divergent squint. Prof. Agnew declined to remove the tumor of the ribs until the head-symptoms were relieved.

For a month no change in the fundus of either eye could be detected with the ophthalmoscope; later, there seemed to be a slight haziness, and some projection of the right papilla. This, owing to a marked astigmatism, was difficult to determine positively. The patient had frequent attacks of headache, lost strength and flesh, and had a capricious appetite; all the while the tumor was increasing and rapidly involving the adjacent ribs. About January 1, 1873, œdema of the left eyelid was noticed, varying in degree from day to day. In two weeks' time this partially subsided, and a small tumor at the outer part of the orbit, just beneath the superciliary ridge, was discovered. The latter rapidly increased, displacing the eye downwards and outwards, and was occasionally accompanied by marked œdema of the lids. After each attack of œdema there was a decided increase of the tumor. The vision of the eye was not affected.

During the latter part of June, 1873, the same condition supervened in the right orbit: both of the growths enlarging, bulging upwards and outwards the orbital plates of the frontal bone, with protrusion of the eyes, injection of the conjunctiva, and, finally, ulceration of both corneæ. There also commenced at this time a small, soft growth on the vertex. During the latter part of July, 1873, another growth commenced on the right masseter muscle. This increased very rapidly, and extended into the back part of the mouth, where ulceration

soon commenced. It became so large, and so involved the muscle, as to cause almost complete closure of the mouth.

During the last three months of life, mydriasis came on in both eyes, commencing in the left, with concomitant loss of sight. From an early period of her illness, she was annoyed by indefinite abdominal pains, preventing sleep, and towards the close of life these became so severe as to require large doses of morphia. At first the general health was good, but latterly deteriorated rapidly. Six weeks before death the patient became totally blind, owing to the destruction of the corneæ from ulceration, and there were repeated hemorrhages from the stumps. For three or four weeks before death there was a slight cough present, and the tumor in the side ulcerated in two places, from which several severe hemorrhages occurred. At this time she also suffered from deafness of the right ear. She died quite suddenly, during sleep, on November 1, 1873.

In the post-mortem of the above case I was assisted by Dr. F. P. Henry, who kindly made for me the following notes:

A large hemispherical tumor occupied the left anterior half of the frontal bone, and extended below it, so as to involve the orbit and its contents. Its transverse diameter extended from the root of the nose to a little beyond the external angular process of the frontal bone; its perpendicular diameter, from the infra-orbital ridge nearly to the commencement of the hair. The eyebrow crossed the tumor at its centre. A similar tumor occupied the right side of the frontal bone, but was situated more externally, its centre corresponding to the external angular process, with a radius of about an inch. A third smaller tumor was situated over the right masseter muscle, and, by its growth inwards, had involved the alveolar processes of the superior maxillary bone and caused the loss of one of the molar teeth.

Both eyeballs were extruded, but the exophthalmos was more marked on the left side. The balls were completely disorganized, a bluish, semi-transparent disk marking the situation of the cornea; but there was nothing resembling a staphyloma.

On removing the scalp, a number of hemispherical tumors were found beneath the pericranium, varying from the size of a split pea to that of a section of a walnut. These tumors when cut into were yellow-white in color, and of a cheesy consistence. The largest of them was over the posterior fontanelle. There were two on the coronal suture, one in the median line, the other on the right side near the anterior border of the temporal muscle. There was a fourth beneath the left temporal muscle nearly as large as the one over the posterior fontanelle, and a fifth, smaller, at the posterior border of the same muscle. Besides these, there were a number of smaller growths scattered over the cranial surface, from the size of a split pea to that of a section of a filbert. On removing the skull, the largest of these—viz., the one over the posterior fontanelle, those on the coronal suture, and the one beneath the left temporal muscle—were found to be attached

to the dura mater, and involved the bone in its entire thickness. The veins covering the convolutions were engorged with blood,—the venous engorgement being more marked over the right hemisphere. The dura mater, beneath the tumors described, was adherent to the brain. With the exception of these adhesions, the brain was healthy. A small amount of fluid, estimated at one drachm, was found in each lateral ventricle. The tumor observed externally on the left anterior half of the frontal bone was found to be adherent to the dura mater at the sphenoidal fissure and its neighborhood, its point of attachment having a diameter of about an inch. The roof of the left orbit was broken open, and its cavity examined. No trace of eyeball, muscles, or nerves was found, the orbital cavity being completely filled by the tumor.

At the right side of the thorax was a large pyriform tumor, its base extending from the inferior angle of the scapula to the lower border of the ribs, its apex looking outward and projecting from the thorax. It bore a striking resemblance to a mammary gland. At its apex was a circular ulcer nearly an inch in diameter, covered with a grayish-yellow slough; above this was another about half the size, and presenting the same sloughy surface. This tumor was but a portion of a much larger growth, which occupied about three-fourths of the right pleural cavity, displacing the lung upward and backward, and compressing it to such an extent that its tissue was not readily recognized. The left lung was healthy. Both ventricles of the heart were filled with fluid blood. The liver occupied a lower position than normal, being apparently crowded down by the tumor in the thorax.

On microscopic examination were found the ordinary cell-elements of small round-celled sarcoma,—viz., round, and, in some portions, spindle-shaped, nucleolo-nucleolated cells, imbedded in a delicate, faintly-fibrillated stroma.

There are several points of interest connected with this case, to which I shall briefly refer. According to Knapp, changes in the ophthalmoscopic appearances of the eye generally accompany intra-orbital growths, and necessarily do so when the optic nerve is involved. But in this case there was no appreciable change in the fundus of either eye, even within a few months of death, although there must necessarily have been pressure exerted by the growths on the optic nerves. Again, notwithstanding the great amount of disease discovered in the right pleural cavity after death, there were no ante-mortem symptoms beyond dyspnoea and a slight cough, which only came on about three weeks before death. In addition to these slight symptoms, at one time I detected what I thought to be a fluid effusion in that side of the chest; for there was dullness on percussion and absence of respiratory murmur at least two inches higher than a subsequent exploration revealed.

As regards the frequency of such cases, I have carefully searched through most of the English and French works on diseases of the eye and on general surgery, and have been unable to discover with certainty any similar ones. In two cases—one re-

ported by Abernethy,* the other by Paget†—the growths seemed to have been similar in their site, but neither was secondary to, or contemporary with, other like deposits. I wish to make it clear that I do not refer to recidivars after extirpation of the eyeball, for they are common. Many of the cases I have met with in my reading, especially among writers of the earlier part of this century, that have been classed as encephaloid, seem to have been really sarcomata. Galezowski refers to Nélaton's Clinical Surgery as mentioning several; but, on examining the record, they are found to be described as encephaloid. Owing to no description of their microscopical appearances being given, I think it best to pass them over.



The drawing was made about two months before death. When this took place, the morbid changes were still more marked.

REMARKS RELATIVE TO THE USE OF GELSEMINUM IN THE TREATMENT OF INTERMITTENT FEVER AND IRRITABLE BLADDER.

BY JAMES D. McGAUGHEY, M.D.,

Wallingford, Connecticut.

GELSEMINUM has been before the profession for a number of years, and, although possessing valuable therapeutic powers, has not come into general use, and does not receive the attention that should be accorded to it. I have been somewhat surprised to find that there are many physicians who have never prescribed it, and who know nothing about it. This seems to be the case more especially with country, or, as our metropolitan brethren love to term us, "rural," physicians, who with increased age get to running into routine channels, diminishing their materia medica until but few medicines are left, and continuing the use of these to the exclusion of others, because, having tried them for years, they "know what they can do with them," not realizing that certain ends which they

* Surgical Observations on Tumors, etc., p. 43. London, 1811.
† Paget's Lectures on Surgical Pathology, p. 469.

may have attained with their exclusive materia medica can be more easily, scientifically, and quickly reached by other remedies gradually coming into use. Some physicians have a particular fear of those remedies which, if taken to a certain extent, produce their physiological effects upon some particular organs or parts of the economy, and look upon those who use them, especially if younger in the profession, as audacious spirits, whose temerity will be properly tempered by age. According to my experience, gelseminum is one of those remedies whose therapeutic powers are not fully brought into play until its physiological phenomena are produced. Its remedial qualities may be exerted, though, to a certain extent, prior to its paralyzing effect upon the motor nerves of some muscles; but to be useful to its fullest extent it should be carefully given until the eyelids begin to droop. I deduced this opinion from having observed its action while using it in intermittent fever; and, this being the case, many abandon it because they derive no benefit from it, or because the unpleasant complaints of unreasonable patients more than counterbalance the good achieved. Gelseminum has been used in quite a number of diseases: lauded by some, condemned by others; of ephemeral reputation in some localities, a permanent and much-used medicine in others. I do not intend to say anything relative to its therapeutic power in any disease except two,—intermittent fever, and irritable bladder. In the latter, I have had but a limited experience; in the former, my opinions are deduced from a large number of cases. I have used it in intermittent fever *to assist cinchona in overcoming those cases that resisted bark when used alone*, and have been highly pleased with the success I have uniformly met with.

I will more particularly mention the *varieties* of intermittent fever in which I have found gelseminum most useful. Every physician who has had to deal with intermittent fever has met with cases of a regular paroxysmal form, quotidian, tertian, or otherwise, easily controlled by quinine; yet after a certain length of time the paroxysms return again and again, necessitating larger antiperiodic doses, until the alkaloid has become useful only in preventing for a short time the attack, having lost its curative powers altogether. In such cases gelseminum shows its antimalarial powers to a gratifying extent. If, after taking, as it were, a new start in the treatment of such a variety of intermittent fever, we attend to any congestion or inaction that may be lurking about the abdominal viscera, and combine quinine with *gelseminum*, and give them until the latter produces its physiological effects, the inveterate catenation of morbid action will be broken in upon without failure *in almost every case*, and there will be but little danger of *relapse until the subsequent season*. Of course it will fail to produce the desired effect in a small percentage of cases, as we claim no specifics in the regular practice.

The second variety is where, in the beginning of autumn, the malarial cases lose their regular paroxysmal form, and are characterized by irregular chills and sweats,—a partial paroxysm sometimes occur-

ring in the morning or afternoon,—occasionally alternate fever and sweating during the night; loaded tongue; *pains in the bones and joints* all over the body; headache; anorexia; nausea; high-colored urine; occasional dysenteric symptoms; malaise, etc. If quinine has been used alone in these cases without any amelioration of symptoms, the vagary of malaria still holding its curious anomalous course, gelseminum, added to the treatment and pushed to considerable weakness of eyelids, will generally conquer the disease in a short time.

Its effects in one case that came under my observation during the past season seemed more magical than otherwise; though such an extravagant term is hardly allowable in sober medicine. I feel pretty well assured that if physicians will give gelseminum a fair trial in connection with quinine, in cases where quinine alone has failed to cure, they will meet with gratifying success; provided *they push the gelseminum until its physiological effects are produced*. I think it is of prime importance, *in all cases of malarial fever, to attend strictly to the condition of the abdominal viscera*,—to keep the eliminative organs, bowels and kidneys, in a state of activity. It is to the neglect of such precautions that we are to attribute so many failures in administering quinine. I paid attention to this point in the treatment of about one hundred and twenty-five cases of intermittent fever which have come under my observation in the past two years, and I am fully convinced that if we ignore the condition of the abdominal viscera, and recklessly rely upon the antimalarial powers of quinine alone, or its accessories, the fame of cinchona as a "specific" will never be vindicated or realized.

Gelseminum has been recommended by some physicians in gonorrhœa, but I cannot see upon what grounds. It has some control over the mucous membrane of the bladder and urethra, but none at all, I think, over the specific inflammation produced by gonorrhœal virus.

Dr. W. Scott Hill, of Maine, in the *American Journal of the Medical Sciences* for January, 1872, reports five cases of irritable bladder successfully treated with gelseminum combined with bromide of potassium; but how much of the cure depended upon the bromide he does not seem to say. A relapse of Case II. "was successfully treated with gelseminum alone," says Dr. Hill; but bromide of potassium was a prominent constituent in the treatment of the other five cases (including the second, excepting the relapse). A few days ago a gentleman called upon me to treat him for gonorrhœa. After taking the usual treatment for a day or two, the discharge stopped; he took cold, and the discharge returned worse than ever; the foreskin became infiltrated, and there was great pain in making water, with considerable depression of spirits. By rest and careful treatment he improved: the discharge again stopped, but the bladder had become very irritable; he was compelled to pass water every fifteen minutes, with pain and scalding, only a few drops coming away at a time. Gonorrhœal treatment was omitted, and I placed him upon a combination of bicarbonate of potassium and morphia.

After three days he returned, and reported no improvement. I then gave him bromide of potassium, bicarbonate of potassium, fluid extract of gelsemium, a little fluid extract of buchu, and tincture of lupulin. In a day or two he was entirely relieved. While taking the gelsemium the gonorrhœal discharge *reappeared*, and he was compelled to return to injections, and to cubebs; and, as his health was somewhat impaired, and the discharge chronic, quinine, iron, and cantharides were used to complete the cure. This case corresponds with those of Dr. Hill, and further corroborates his observations as to the beneficial effects of gelsemium in irritable bladder, provided bromide of potassium has no controlling powers over the irritable conditions the urinary mucous membrane sometimes gets into. Gelsemium being so useful in irritable bladder, it seems reasonable to suppose that, combined with bromide of potassium, it would be quite an efficient agent in combating urethral fever, and in allaying the extreme sensitiveness that sometimes arises in cases of those addicted to onanism. Perhaps spasmodic stricture might be overcome by it, as its power in paralyzing the motor nerves of some muscles certainly shows it has antispasmodic virtues. Extended, cautious observation relative to the therapeutic value of gelsemium will, I think, establish it as a first-class remedy, to be depended upon in certain emergencies, answering certain indications that can be supplied by no other medicine.

ANALYSIS OF ONE HUNDRED CASES IN OBSTETRIC PRACTICE.

BY J. H. BLATNER, M.D.

CASES.

LEFT occipito-anterior	49
Right occipito-anterior	30
Placenta prævia centralis	1
Placenta prævia lateralis, complicated with shoulder-presentation	1
Lateral plane, with prolapse of hand and arm	1
Prolapsed uterus	1
Placenta accreta	4
Left occipito-anterior complicated by tumor at junction of coccyx and sacrum	1
Twins, complicated with laceration of the cord	1
Cord about neck of child	4
Face-presentation	2
Eclampsia, complicated labor	1
Constricted band from superior to inferior commissure, complicated labor	1
Hand and arm prolapsed	2
Abortion in consequence of typhoid fever	1

Total 100

Auscultation of the number of pulsations of the foetal heart, with a view of determining the sex in utero, tested in 20 cases.

Five females, pulse ranging from 135 to 180; 9 males, pulse ranging from 110 to 130: diagnosis correct in 14 cases.

PLACENTA PRÆVIA CENTRALIS.

Mrs. P., æt. 22, robust constitution, primipara. Had hemorrhages during the third, fourth, fifth, and seventh months of pregnancy. The hemorrhage being per-

sistent during the latter month, the diagnosis of placenta prævia was made. At this time labor-pains also set in, and the hemorrhage continued. Having made but little progress after twelve hours of labor, and having employed the tampon and a rubber bag filled with water to check the hemorrhage, with but little success, we concluded to dilate the os and cervix with Barnes's dilators. The dilators were used during the day, when, the os being sufficiently open to admit the passage of a few fingers, rapid dilatation was effected by means of the fingers and hand. The insertion of the placenta being directly over the os, it was almost entirely removed, and podalic version performed. Very little hemorrhage followed the operation. After the delivery of the fœtus, a small portion of placenta was found to be adherent to the inferior margin of the anterior surface of the uterus. The hemorrhage following the operation was not such as we would naturally expect with an adherent placenta. I attribute the recovery in this case to the method of treatment, viz., the rapid dilatation of the os and cervix, and the quick termination of labor, known as the *accouchement forcé* of the French writers. A few days after confinement parametritis developed itself, followed by pelvic cellulitis and the formation of a pelvic abscess. The abscess finally opened through the posterior wall of the vagina.

The remaining history of this case is that of a slow recovery. The patient is now in good health, and has since miscarried again at the fifth month of pregnancy. The complications attending the lying-in state were treated by carbolic acid injections, tonics, and a supporting regimen.

SHOULDER-PRESENTATION, COMPLICATED WITH PLACENTA PRÆVIA LATERALIS.

Mrs. G., æt. 35, robust constitution, multipara. Had at her first labor twins which were still-born, and at her second a macerated fœtus. During this, her last confinement, pains came on early, and no diagnosis of the presentation could be made during the first twenty-four hours of labor. After a siege of nearly forty-eight hours, the following condition of things was found. The shoulder was presenting at the os, and on one side the margin of the placenta could be easily distinguished. Auscultation was repeatedly employed, but it gave no clue as to whether the child was living or dead. The pelvis being somewhat contracted, and the patient fast failing in strength, podalic version was determined upon, and performed while the patient was under the influence of chloroform. After considerable trouble in turning, owing to the escape of the amniotic liquor, an asphyxiated child was delivered, but could not, however, be resuscitated.

The placenta was found to be attached low down, and partially at the inferior margin of the uterus and os internum. Considerable hemorrhage followed its removal, but was controlled by means of pressure, ergot, cold applications, etc. The patient rallied well while in child-bed, and is at present in good health. The only objection to version in this case might have been the possibility of detaching the placenta during the operation, and thus engendering a dangerous hemorrhage. But the position of the child and the late hour at which a diagnosis was made in this case admitted of no other course of procedure.

Should a similar case occur again in my practice, I would, provided I could make a diagnosis sufficiently early, employ rapid dilatation, and effect as speedy a delivery as possible, in order to save the life of the child, the cause of whose death in the case cited was undoubtedly the long-continued pressure upon the placenta and cord.

LEFT LATERAL PLANE PRESENTATION, WITH PRO-LAPSE OF THE ARM AND HAND.

Mrs. D., æt. 40, pale and anæmic, multipara. Has had six previous confinements, most of which were breech-presentations. At my first examination, which was twelve hours after uterine contractions had begun, and the waters broken, I found a hand and arm filling up the vagina, and, upon introducing my finger into the os, plainly felt the thorax of the child. By external manipulation I found the head in the left side of the mother. Examining the position of the hand, which lay with its palm towards the anterior surface of the vagina, I diagnosed a lateral plane presentation, with the abdomen of the child towards the anterior surface of the vagina. The pulsation of the foetal heart was heard on the left side below the umbilicus, and at the rate of 132 per minute. Podalic version was the only plan of treatment indicated, and it was accordingly performed with much difficulty, and only after repeated attempts. The extremities and thorax were easily brought down as far as the head, which would not yield.

Sneller's method of hooking the finger in the mouth of the child was first attempted, but, it proving unsuccessful, I employed the method generally known under the name of the "Prayne manipulation." This consists in bringing the body well down, placing the first and third fingers on the nape of the neck, bringing the occiput under the symphysis by drawing the body of the child well towards the nates of the mother, and then raising the body towards the abdomen of the mother, by means of which the forehead and face are carried over the perineum. The only objection to this treatment is the impossibility of supporting the perineum, as both hands of the operator are in use. The danger of tearing the head from the trunk, as stated by some authors, is hardly, I think, to be dreaded; in case of a macerated foetus it might possibly occur. By this manipulation I succeeded in delivering the foetus, which proved to be, as I had suspected from the foetal pulsation, a male child, with an unusually developed, although not hydrocephalic, head. The patient progressed towards convalescence without any interruption. The child, which was born in an asphyxiated condition, was resuscitated by introducing a small catheter into the larynx and thus inducing artificial respiration.

LABOR IMPEDED BY A BONY TUMOR AT THE JUNCTION OF THE SACRUM AND COCCYX.

Mrs. R., æt. 40, weak constitution; has had two previous confinements, the first of which was tedious, but terminated naturally; at the second confinement she was attended by a homœopathic physician in Brooklyn, who applied the forceps after she had been in labor for over forty-eight hours. The patient states that when the child was delivered with the forceps she felt something snap or break. At her third confinement, in which I attended her, the pains came on well, and the os dilated rapidly. Everything progressed normally until the head had fairly entered the excavation of the pelvis, when it seemed to lie impacted. Upon making a more careful examination of the bony structure of the pelvis, I found just at the junction of the sacrum and coccyx a hard resistant body, about the size of a walnut, with one end flattened, which evidently was the cause of the non-advancement of the head. Upon questioning the patient more closely, I discovered that she had sustained a fall upon her back and buttocks when 17 years of age, and was lamed in consequence for some time after. The tumor was apparently caused by the union of a fracture of the lower end of the sacrum, with resulting exuberant callus, and anchylosis of the sacro-coccygeal joint.

After consultation with Dr. Vanderveer, we decided to apply the forceps. The head, being small, was easily

delivered without any unpleasant complication. With the exception of a very lame back, the patient convalesced nicely. The head of the child bore no impression whatever, and it is to this day living and in good health.

FRAGILE CORD—LIGATURE APPLIED THREE TIMES.

On January 8, 1873, I attended, for my friend Dr. Case, Mrs. M., a healthy multipara, in her second confinement. The case was a perfectly normal one, and nothing untoward happened until I proceeded to ligate the cord, which, as is my custom, was tied about three inches from the navel. The first ligature, which was not tightly drawn, cut through the coats of the umbilical vessels, and copious hemorrhage ensued. I immediately applied a second ligature, but with the same result. The ligatures of which I had made use were composed of five or six strands of cotton thread; I have found them serviceable in most cases. Compressing the bleeding vessels with my fingers, I sent for some broad tape, and finally succeeded in ligating the cord by means of it, there only remaining about one inch of the cord attached to the umbilicus. Was this a case of fatty degeneration of the umbilical arteries and veins? It certainly demonstrates the necessity of not cutting the cord too near the navel.

TWINS AT SEVEN MONTHS, COMPLICATED WITH LACERATION OF THE CORD.

Mrs. T., a French lady, æt. 28, multipara. I was called in great haste on the 28th of June, by a message stating "that the woman was bleeding to death." When I arrived I found the patient very feeble, and almost as pale as a cadaver. The bed was drenched with blood. Upon inspection, I discovered a seven-months' foetus already born, and immediately tied the cord. Examining per vaginam, I felt the breech of a second foetus, which was not advancing, as there were no uterine contractions, and the uterus was almost in a state of atony. There being no time to lose, I extracted the second foetus, and in doing so must have lacerated the cord, for there was very profuse hemorrhage, which I afterwards found came from the laceration in the cord. The placenta almost immediately followed. The hemorrhage ceased when pressure was applied above and below the laceration, until I had an opportunity to apply the ligatures. The placenta was divided in two parts by a membranous ridge. The patient needing all my attention, I could make no attempt to resuscitate the children. The patient made a very slow recovery, and is yet suffering from anæmia.

LABOR COMPLICATED BY THE PRESENCE OF THE HYMEN.

BY E. P. BERNARDY, M.D.

ON the morning of the 8th of November, 1873, I was called to attend Mrs. E. M., æt. 20, in her first confinement. On arriving, I found the patient had suffered all the day before; the pains were not strong. On making an examination for the purpose of discovering the condition of the os, my finger came in contact with what I first supposed to be the smaller left lip of the vulva; but on directing my finger towards the right side I was able to enter the vagina without much difficulty. The os was completely dilated, bag of waters ruptured, vertex presentation in the left anterior position. Notwithstanding the pains, the head remained fixed at the superior strait.

On withdrawing my finger, I gave it a hooked shape, and when near the exit I was unable to withdraw it, on account of its being held back by a membrane, which, on exposure, I found to be the hymen. It extended from the lower back portion of the meatus urinarius along the left side of the vulva down to the fourchette, leaving a space on the right side large enough to introduce the first two fingers. The hymen was very flexible, and easily pushed towards the left side.

After waiting for nearly four hours, and finding labor had made no progress, and the patient getting weak, I determined to deliver with the forceps (Wallace). I first cut the hymen, which was done by my slipping my left index-finger under it, putting it a little on the stretch, then, running a bistoury along the finger, I cut it in half; the cut was followed by a few drops of blood; the forceps were applied, and the patient delivered of a fine, healthy boy.

The patient did well, with the exception of some irritation of the bladder, which yielded to treatment. In treatment of the cut, carbolic oil was used.

In questioning the husband, he stated that he was unable to have intercourse without subjecting his wife to great suffering, and that on several occasions he had to cease from the attempt.

I report the case, believing that it will prove interesting to your readers, as such cases are very rare.

PHILADELPHIA.

NOTES OF HOSPITAL PRACTICE.

CHARITY HOSPITAL, BLACKWELL'S ISLAND, NEW YORK.

CLINIC OF PROF. LEWIS A. SAYRE.

Reported by FRANK WOODBURY, M.D.

CARIES OF CLAVICLE AND STERNUM—SAYRE'S APPARATUS FOR FRACTURED CLAVICLE.

THIS patient (a man, aged about 28 years) has caries of the clavicle and sterno-clavicular articulation, over which there are a number of sinuses; there is also one over the middle of the sternum. He dates the disease from a bruise in this situation, caused by being "jammed" by a horse, some months ago. This is a *strumous* affection, according to some surgeons, but I consider it purely local. To me the morbid process here was as simple as that in an ordinary abscess, for which we are not in the habit of invoking a special diathesis. At the time of the injury the tissues and periosteum were contused; periostitis followed, which caused the death of a portion of bone; an abscess naturally resulted, which gradually worked its way to the surface, and the bone continued in a carious or ulcerated condition. A bone-abscess is as simple as an abscess in the soft parts, only its progress is slower.

Ether having been administered, we will now expose and scrape away all the dead material, but will leave the periosteum as perfect as possible, so as to encourage the formation of new bone. The subject of the reproduction of bone is one of great interest in conservative surgery, and has excited general attention during

the last few years by some of the surprising results that have been reported, which I need not recall to you.

The sinus over the sternum is treated in the same way. The disease is found to involve almost the entire thickness of the bone. Had this abscess opened into the chest instead of externally, the sternum would have required early trephining in order to prevent empyema and serious chest-trouble.

As the sterno-clavicular support to the shoulder is destroyed by the removal of the inner extremity of the clavicle, we will endeavor to keep the clavicle at rest until the periosteum reproduces the bone. To do this we will apply my adhesive-plaster dressing for fractured clavicle. When the clavicular brace is destroyed by fracture or disease, the shoulder falls downward, forward, and inward; the outer fragment of the clavicle (drawn down by the weight of the arm through its ligamentous and muscular attachments) is overridden by the inner portion (elevated by the sterno-cleido-mastoid). The object of every method of treatment is to force the shoulder upward, outward, and backward, and to keep it in that position. These indications can be perfectly fulfilled by two broad (three-inch) strips of adhesive plaster, about one-half yard long. The end of the first strip is doubled over and stitched so as to form a loop, a little larger in circumference than the middle of the arm. This is slipped over the arm, after being heated, so that it adheres to it around the belly of the biceps. The elbow is then pushed upward and backward, and held there while the strip is carried transversely across the back, entirely around the chest, and the end fastened to the body of the strip at the back. Now, if the elbow of the affected side is brought forward, and the hand placed on the opposite clavicle, the first loop around the arm acts as a fulcrum, and the other extremity of the humerus and the shoulder are forced upward, outward, and backward. The arm is held in this position by the second strip of plaster, which, starting from the sound shoulder, runs along the fore-arm under the elbow, and obliquely across the back to its origin, where it is fastened. By this means the deformity is perfectly reduced in fractured clavicle; and, as the same indications require to be fulfilled in this case, we will here apply it. Taking the patient by the affected arm, he can be whirled around on his heels without producing displacement or pain. With the imported plaster that I use, the apparatus does not need reapplication, but may remain undisturbed until the bone unites.

CHRONIC SYNOVITIS OF ELBOW-JOINT.

This man is a blacksmith, aged about 40. A year ago he contused his elbow, and, although it remained weak and somewhat swollen, he was not prevented from working at the anvil until ten weeks ago. Then it became inflamed, swollen, and so painful as to deprive him of rest at night.

It may eventually be necessary to excise this joint; but in the mean time, as the fore-arm and hand are cedematous and congested, we will try what can be gained by emptying the capillaries by pressure and applying cold. The elastic bandage will unload the blood-vessels, and, if the morbid process has not advanced too far, we may save the joint.

This gum bandage, if applied only around the elbow, would quickly strangle the limb, and cause mortification by obstructing the circulation. In order to avoid this, we apply it regularly up from the hand (having the fingers first separated by cotton wadding), so as to equalize the compression. The joint will now be surrounded by an ice-poultice, to keep down heat and inflammation, and he shall have anodynes, and a supporting treatment. As there is no disease of the articular cartilages, extension is not required.

HIP-JOINT DISEASE—SAYRE'S APPARATUS.

This boy has trouble in his hip-joint, with great deformity: as his mother speaks but little English, and he none at all, it is impossible to gain a satisfactory history of the case. He is rather old for true hip-joint disease, and I am in doubt whether it was not originally a diastasis. However, you shall hear the few notes of his history that we have been able to obtain. He is a Dane, about 15 years of age. He was a strong, healthy child until ten years ago, when he commenced to limp; this was followed by an abscess in the hip-joint, which still discharges through several sinuses. His mother is positive that he received no injury at that time; but she may be mistaken, as children are often crippled by a nurse's carelessness, while the mother remains ignorant of the cause.

In order to estimate the deformity in a case of hip-joint disease, place the patient straight on his back on a table or the floor; then, having an imaginary line drawn parallel with the iliac crests, at right angles with the axis of the spinal column, and the sound leg extended, the distortion is apparent. Applying this to the case before us, we see the affected thigh lying across the abdomen with the knee above the opposite iliac crest,—an impossible position if the joint was normal. As he resumes the erect position, the pelvis "cocks up like a duck's tail" in the effort to accommodate itself to the disease, and the deformity is less marked.

There has been serious destruction of this joint, and the constant suffering and discharge have greatly affected his general health, and, if unrelieved, would undoubtedly cause his death. He is anæmic, and apparently broken down by the disease; yet he will bear the suppurating and shock of the operation really much better than his appearance would indicate, from the fact that the system has in a measure begotten a tolerance of the disease and endeavored to accommodate itself thereto.

It is of great importance to recognize hip-joint disease in its incipient stage, so as to give it the advantage of treatment as early as possible. Two principal points in the diagnosis are pain and position. The pain complained of is intermittent, may be felt anywhere along the limb, but is most frequently referred to the knee, and often attacks the patient suddenly at night. This is produced by the sudden, forcible impact of the diseased articular surfaces, caused by reflex spasmodic contraction of the hip-muscles, from the irritation of the nerve-filaments terminating in the diseased tissue. And this may be taken as a hint for diagnosis. If the joint is inflamed and painful, you can relieve the sufferer at once by simply making extension at the heel; if, on the contrary, you press the diseased articular surfaces together, you elicit unmistakable evidences of pain.

Now, as regards position. In the natural joint the fibres of the capsular ligament, especially that part of it known as the Y or ilio-femoral ligament, run obliquely across the joint. When the capsules become distended by effusion, it can only accommodate itself and increase its capacity by untwisting; this rotates the thigh outward, and slightly lengthens the limb. In this, which may be termed the stage of effusion, the toes are everted, and the heel of the affected limb presents towards the opposite instep. When the disease advances farther, the capsule becomes ruptured, and the effusion escapes; but if the bone becomes extensively diseased it may be gradually disarticulated, and rides on to the dorsum of the ilium; and you will then have the deformity accompanying the iliac dislocation, rendered more marked by the destruction of bone and atrophy of the muscles.

When there is pus in a joint, accompanied by destruction of the synovial membrane, there is no more dan-

ger in opening the joint than in evacuating an abscess in any other situation. The destructive process may sometimes be checked in hip-joint disease by liberating the pus early and applying extension.

The patient being etherized, I will make a free horse-shoe incision around the great trochanter, directly down to the bone. I will not make a careful dissection of each layer of tissue, and divide them upon a grooved director, because by so doing I should make a number of leaflets by which pus could burrow and dissect the neighboring structures; but, selecting a point midway between the edge of the trochanter and the crest of the ilium, I plunge the knife directly into the joint. I find the head and neck of the femur entirely gone; the trochanter minor is eroded and altered by new bony deposit. The acetabulum is good. I will now make an incision through the periosteum, and peel it carefully from the bone. We will now remove the head of the femur below the seat of the disease, being careful not to disturb the insertion of the *psoas magnus* and *iliacus internus* in the periosteum in front,—a point of great importance as regards the future usefulness of the limb. In order to straighten the leg we are obliged to cut the tendon of the tensor *vaginæ femoris*, which, from the distortion, is immediately over the femoral artery. The tendons of the adductor and *gracilis* must also be divided close to their origin. The tenotomy, which should not terminate in a point, but in a cutting edge, is passed behind these muscles, then turned forward so as to shave them from the bone. I will encourage immediate union between the walls of the chasm thus made, and prevent an abscess, by pressing them together by an adhesive strip.

We will not close the wound on the hip, but allow it to remain open for two days, in order to encourage the discharge of pus and prevent infiltration, which we will further guard against by making pressure along the lips of the wound by adhesive strips. The wound shall be packed with sponge, and the periosteum kept distended until bony deposit takes place. The wound is dressed with Peruvian balsam, which, as it contains creasote, is a disinfectant; and I prefer it to carbolic acid because it is far more agreeable.

Rest for the joint is now imperative until the time comes for passive motion, which will prevent ankylosis and make it an ununited fracture. By some surgeons the patient is kept in bed with extension on the leg, but by my apparatus—the "wire breeches"—the object is attained without confining the patient to bed or to the house, as he can go out and get the fresh air every day,—a great advantage to these broken-down subjects of a chronic disease. The apparatus consists of an iron-wire frame-work to support the body and legs, with a movable head-rest, and two foot-plates working by screws, so that strong extension may be maintained when they are fastened to the feet. Lateral strips of plaster run up the inside and outside of each limb, and are then attached to the foot-plates. If extension were made from the foot only, it would strain the lateral ligaments at the ankle. Some oakum being placed in the perineum to relieve the pressure, the pelvis is fastened by a roller bandage, which, running through the perineum and fastening to the side of the apparatus, serves to make counter-extension. Having the foot-plates attached, a folded newspaper is laid over the sound knee, and the limb surrounded by a roller bandage, so as to prevent it from bending and convert it into a solid column of support for the pelvis. The affected limb is now screwed down until it is straight, and we find a shortening of nearly four inches. The extension will be gradually increased as the fascia stretches and the stiffened tissues yield. The pelvis has so long been held at an angle with the spine that it refuses to straighten immediately; but we will put in a

wedge of pillows under his back that can be gradually reduced. The patient now requires good nursing and careful attendance; the wound should be dressed several times a day, if necessary. This can be done without changing the apparatus, which may remain indefinitely. He shall have an anodyne immediately, and good food, cod-liver oil, and stimulants.

Here is a little girl,—a similar case,—operated upon nine weeks ago. She now walks on crutches. There is considerable motion in the joint, as she can lift her foot to put it on a small stool, and, by stooping, flex the thigh at right angles to her body.

TRANSLATIONS.

INFLUENCE OF THE VENOM OF CROTALUS HORRIDUS UPON ELEPHANTIASIS.

From the Portuguese "*Diccionario de Medicina Popular*, por S. L. N. CHERNOVIZ, M.D., Rio de Janeiro, Brazil."

ACCORDING to vulgar belief in many of the States of South America, where elephantiasis is very prevalent, the bite of the rattlesnake is a certain cure for that fearful disease, without any disastrous consequences to the patient. Rumors of cures made by this means came to the ears of a poor-unfortunate who was suffering from the affection, and he determined to try it.

His history is given, in the hope that it may destroy confidence in so unscientific a procedure, and deter any one from an experiment that would be perilous, if not fatal, to life.

Mariano José Machada, æt. 50 years, a man of medium size and athletic constitution, a native of the province of Rio Grande do Sul, Brazil, was attacked by elephantiasis in its severe form; and it made such rapid progress that he was soon disabled and obliged to enter the Lazarus Hospital, in the city of Rio de Janeiro. Here he remained a helpless invalid during four years, subjected to every manner of treatment, without the least improvement in his condition. The disease had extended over his entire body. The skin was everywhere brawny, fibrous, and hypertrophied. The subcutaneous and adipose tissues were increased, and tuberculated lumps were scattered over the body. In the axillæ many of these had ulcerated, and discharged a sanious pus, mixed with shreds of degenerated tissue. The dartos was hypertrophied and hard. His face presented a horrible deformity. The extremities of his fingers had lost their shape; their epidermis could be easily separated in shreds, and the nails were so altered as to be unrecognizable.

Suffering constant pain, a loathsome object, despairing of relief, hating a life so burdensome and dreadful, he caught at the slender hope offered in the reports which reached him, and resolved to ameliorate his condition or die.

The hospital physicians explained to him the uselessness of the remedy proposed, pointed out the certain fatality of it, and endeavored to dissuade him from his determination; but in vain.

He said he was tired of living, and would submit himself to the ordeal, whatever might be its result. He made a statement to the people, and signed a declaration that he acted by his own free will against the advice of his physicians, and that he himself assumed all the responsibility.

Accompanied by his medical attendants, and by a great multitude of people attracted by the novelty and desperation of the proposed act, he proceeded to Rua da Imperatriz, No. 61, where a gentleman had a large rattlesnake in a cage, and, passing his right hand into it, seized the snake around the body. The animal

turned its head and rubbed its nose against the hand upon him. Mariano then tightened his grasp, and the snake buried its fangs in his finger.

This occurred at 11.50 A.M. on the 4th of September. He did not then feel any sensation from the bite, nor from the poison introduced into the wound, and only recognized that he was bitten by the drops of blood upon his finger, and the swelling which soon supervened.

Five minutes after, he experienced a sensation of cold in the hand; and ten minutes later, he felt a slight pain in the palm.

At 12.30 P.M. his hand had increased in size, and the pulse beat much stronger.

At 12.50 his sight became dim, he experienced considerable itching about the face, the volume of the hand was greater, and the pain had extended up the forearm.

At 1 o'clock he was seized with trembling over the entire body, and there was great hyperæsthesia.

At 1.36 the hand was greatly swollen, the fore-arm somewhat enlarged, the pain had extended to the shoulder, there was difficulty in moving the lips, with a sensation of choking, the pulse was more frequent, somnolence manifested itself, and the intellect was profoundly disturbed. Soon after, he complained of feeling cold, and covered himself up with the bedclothes.

At 1.48 he had pain in the tongue, which extended to the throat and stomach.

At 2 o'clock there was difficulty in articulation, and twenty minutes later of deglutition, accompanied by anxiety; there was copious perspiration upon the anterior surface of the body.

At 2.38 the pulse was 96 beats in a minute, there were much restlessness and prostration, and epistaxis commenced.

At 3.5 there were great pain in the arm and face, general perspiration, continuous nasal hemorrhage, and involuntary groaning.

At 3.35 the patient swallowed wine and water without difficulty, though he felt much pressure in the throat; the respiration was labored, and his acute pain did not permit any rest. The nasal hemorrhage continued, and several pustules in the right axilla began to bleed. The arm had become much darker in color, and a redness had become diffused over the entire surface of the body.

At 4.50 his pulse was 104, the temperature of his skin was much above the normal, and saliva dribbled freely from his mouth.

At 5.30 he passed an abundance of urine.

At 7 o'clock the patient slept, groaning continuously, and soon after awoke with a severe pain in his breast and a sensation of choking. Had a copious evacuation of urine. The hemorrhage still continued. He was given aguardente,* water, and sugar, but could not swallow.

At 9.30 he was in a deep, quiet sleep.

At 10 o'clock he took three tablespoonfuls of an infusion of guaco,† and at 11 he took four more of the same.

At 12 P.M. he was sleeping, and apparently comfortable.

At 12.30 A.M. the patient awoke in great alarm, shouted wildly, and wished to confess to the priest. Continued to take the infusion every half-hour. His symptoms for the remainder of the night were much the same. Nasal and pustular hemorrhage continued; he had much pain, was restless, would sleep a little and then awake in great alarm.

At 9.45 A.M. blood appeared in the urine; there were great prostration, and convulsive movements of the throat and lower extremities.

* Aguardente, the common spirit of Brazil, distilled from the fermented juice of the sugar-cane.

† Guaco huaco—the name of a plant indigenous to South America, called *Eupatorium guaco*, order Compositæ: used by the negroes as a specific for snake-bites.

At 10 o'clock a large sinapism was applied to the inner surface of each thigh; he was given an enema of arguente and water, and by the mouth $\frac{1}{3}$ i of lizard oil.

At 11.30 he became comatose, and died quietly. His body was livid in color, covered with purple ecchymoses, exhaled a most offensive odor, and soon swelled to a great size.

G. T. PIZA E ALMEIDA, Student, and
W. H. WINSLOW, M.D.

743 SOUTH TWENTIETH STREET.

ANÆSTHESIA OF THE RETINA.

DR. HIRSCHLER (*Wiener Med. Presse*) calls attention to the fact that, although a large proportion of cases of amblyopia and amaurosis have been explained by the use of the ophthalmoscope, there still remains a considerable number of cases of blindness for which no adequate solution has yet been given. Among these he mentions cases of so-called anæsthesia of the retina, and calls attention to the loss of sight occurring in feeble and hysterical patients. He mentions also those cases of amaurosis which occur suddenly after emotional excitement, or are due to traumatic causes.

A short time ago Dr. Hirschler had the opportunity of observing the case of a woman aged 40 years, who had been injured in the eye by the explosion of a percussion-cap. Immediately after the receipt of the injury, the patient felt pain in the eye, accompanied by the sensation of strong light. The next day she noticed that she was blind in the left eye, and presented herself to the doctor. Nothing abnormal could be seen about the eye, with the exception of a high degree of short-sightedness and strongly-contracted vessels, nor did the patient complain of any pain. If a lamp was held before the eye at a distance of two inches, she was able to see a small point of light; but with this exception she was totally blind. Four days later, the patient was able to see the flame of the lamp at a distance of ten inches, but in other respects her condition was unchanged. In the treatment of the case hypodermic injections of strychnia were employed, but were soon discontinued, owing to the occurrence of symptoms of strychnia-intoxication. Nine days after the accident, a slight improvement was noticed, which steadily increased.

On the 15th of November, about a month from the time of injury, the patient could read Jaeger No. 4, and was regarded as entirely recovered. This case was regarded as a very instructive instance of "anæsthesia retinæ traumatica," and the contraction of the retinal vessels, alluded to above, played an important part in the production of the blindness. The contracted state of the vessels was due to cramp of the muscular tunic excited by the injury. The improvement which was noticed was due not to the influence of the strychnia, but to the remission of the contraction of the muscular tunic.

WILLIAM ASHBRIDGE, M.D.

THE ACTION OF BROMIDE OF CALCIUM.

ACCORDING to the statements of Hammond (*Berliner Klin. Woch.*: Guttman), the bromide of calcium displays more activity in its action in nervous diseases than the bromide of potassium, because it is more readily decomposed, and thus furnishes free bromine more quickly. This last inference can scarcely be supported, since Guttman and Eulenberg have already demonstrated that the action of bromide of potassium is

not due to the bromine which it contains, but to the potassium, and that it operates in the same way as the other potassium salts. The bromide of sodium, on the other hand, has a different action from the bromide of calcium, since it manifests the same powers as the other sodium salts,—a conclusive proof that the bromine is not the active constituent in the salts under discussion. These experimental results are confirmed by the therapeutic use of these salts, the cheaper chloride of potassium being substituted for the more costly bromide. Bromide of calcium is three to four times less active than bromide of potassium, it requiring the injection of one-fourth gramme of the lime salt to kill a frog, while eight grammes were needed to produce the like result in a rabbit. The fatal results manifested themselves more slowly than after the smaller doses of the bromide of potassium,—two to four grammes of the last-named salt producing death in a rabbit in thirty minutes, while, with eight grammes of the bromide of calcium, death occurred only after several hours. The animals died with the symptoms of a gradually increasing collapse.

The evidences of the poisonous action of the potassium salt are of an entirely different character: the animals die with symptoms of paralysis of the heart, dyspnoea, convulsions, and symptoms of suffocation. The action of this salt upon the heart in warm-blooded animals is so marked that its effect upon the nervous system is scarcely noticeable. The bromide of calcium, on the contrary, does not act at all upon the heart, but upon the nerve-centres, and to a much less degree than the bromide of potassium. The iodide and chloride of calcium act in exactly the same way as the bromide.

It can then be stated, in summing up the facts relative to the action of these salts, that the bromide of calcium acts as do the other calcium salts, and that the bromine is not the active element.

The bromide of calcium is, like the bromide of potassium, a sedative to the nervous centres, but is much weaker, and if it is to be used in therapeutics must be given in much larger doses.

WILLIAM ASHBRIDGE, M.D.

CONDITION OF THE UTERUS IN PROSTITUTES.

SEYDEL gives (*Berliner Klin. Woch.*) the following results from examinations made upon 160 prostitutes:

1. The gynaecological affections of women of this class are, for the most part, affections of the uterus and the urethra (especially of the orifice of the urethra).
2. Catarrhal affections of the mucous membrane of the uterus are the most common, then inflammatory enlargement of the uterine tissues; while parametritis and changes in the position of the womb are less frequent.
3. In the urethra the most frequent pathological change is at the orifice, and is due to gonorrhœal infection and mechanical violence.
4. The discharge from the mucous membrane of the vagina and uterus is the cause of the infrequency of conception and of the frequent occurrence of abortion in women of this class.

WILLIAM ASHBRIDGE, M.D.

HYPODERMICS OF WHISKY (*Medical Record*, February 16, 1874).—In a case of shock from railway injuries, the patient was treated with hypodermic injections of from fifteen to thirty drops of whisky, his pulse being sufficiently strengthened in this manner to warrant amputation of the leg.

PHILADELPHIA
MEDICAL TIMES.
 A WEEKLY JOURNAL OF
 MEDICAL AND SURGICAL SCIENCE.

The Philadelphia Medical Times is an independent journal, devoted to no ends or interests whatever but those common to all who cultivate the science of medicine. Its columns are open to all those who wish to express their views on any subject coming within its legitimate sphere.

We invite contributions, reports of cases, notes and queries, medical news, and whatever may tend to increase the value of our pages.

All communications must bear the name of the sender (whether the name is to be published or not), and should be addressed to Editor Philadelphia Medical Times, care of the Publishers.

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SATURDAY, MARCH 7, 1874.

EDITORIAL.

HERE AND THERE.

IN America, when a young medical man whose enthusiasm has not yet been rendered torpid by the frosts of professional indifference or exhausted by the struggle with circumstances desires to do any original experimental work, he seeks out some hidden stable-loft, or perhaps by good luck obtains a corner during the summer months in some dissecting-room; and, it may be, going without his dinners to acquire the means for the purchase of his simple instruments, works away as best he can. Supposing his talents equal his enthusiasm, and that a fair measure of scientific success reward his efforts, what is the result? He has, perhaps, the satisfaction of seeing his articles quoted abroad approvingly; but at home grave professors look upon him pityingly or perhaps sneeringly; middle-aged brethren, remembering still the days of their youth, say that he will get over it; and, whilst others of his class float easily with the tide into competence and comfort, he struggles and works all the time against the rapids.

Some years since, we heard a professor in a leading medical school—a man, as measured by our standards, deservedly foremost in his profession—say to a young physician, “Doctor, I was like you when I was young: I worked hard, my papers were very well received, but I found that it did not pay. What do you get for it? Who cares any more for you? You will carry it on till you are thirty or a little older, and then you will be like the rest,—you

will give it up.” The career of the professor has been the reflex of his words,—an industrious, fruitful youth, many years of absolute barrenness in the professorial chair; and his words were the words of wisdom, his acts the result of a profound appreciation of the drift of the times, and of the means of securing the rewards valued of men.

The youth, as we watched him during the conversation alluded to, looked on with incredulity and wonder; but on talking with him recently we learned that he too had drunk of the waters of Marah and found them bitter, and we greatly fear that an election to a professorship is all that is needed to turn his steps into the trodden path and to teach him the refrain,—

“Ah, why

Should life all labor be?

Let us alone. Time driveth onward fast,

And in a little while our lips are dumb.

Let us alone.

All things have rest, and ripen toward the grave

In silence; ripen, fall, and cease.

Give us long rest or death—dark death, or dreamful ease.”

In a late number of the *Edinburgh Medical Journal* is an account of the Physiological Laboratory under the care of Professor Ludwig, at Leipsic, an account which we commend to the attention of those who wonder or are annoyed at the little recognition that American scientific medicine receives abroad. The laboratory is built so as to surround three sides of a rectangle, with a court-yard in the centre, and is about one hundred and twenty feet in each direction. It is furnished with various rooms for chemical, histological, and physiological work, with an aviary, frog-ponds, stables, rooms for small animals, etc., etc.: all necessary apparatus, from a steam-engine to prepare blood-serum, to a table and automatic respiratory bellows for curarized animals, is in profusion.

Here students are received, and after a little training are put to work under the direction of Professor Ludwig, who is thus enabled to multiply, as it were, his hands, and thereby do far more justice to his brain-power than if he had to work out all his ideas himself. The result is already seven goodly volumes of valuable researches,—a result which alone is more than America has produced in the century.

If we omit Brown-Séquard,—a cosmopolitan bird of passage,—Leipsic, a town about the size of Providence, contributes to the world in a single year more in physiology than is worth the looking at than does America in a decade. Not because the German intellect is superior to the American, but because the Germans elect professors who are workers, and would eject as a *lusus naturæ* one who did not

continue to work whilst holding his position; and because the Germans encourage young men, and give them training and opportunities for work and guidance in their early flights.

CORRESPONDENCE.

TO THE EDITOR OF THE PHILADELPHIA MEDICAL TIMES:

DEAR SIR,—On p. 325 of your last issue I find a phonographic report of some remarks I was kindly permitted to make before a meeting of Philadelphia physicians a few days ago. As I had no opportunity of seeing the manuscript of the reporters, a number of mistakes have unavoidably crept in. Thus, "Dalton, of Holland" ought to read, D'Alton, of Halle; "Braun," Boehm; "embryo," amnion; "Kernoch," König. If I had a right to expect that my extemporaneous remarks on that interesting occasion could command anything but a temporary attention, I should also have desired to add a few corrections in regard to facts stated by me. For the moment, I trust you will be so kind as to insert the above changes.

Yours, very respectfully,

A. JACOBI, M.D.

110 WEST 34TH STREET, NEW YORK, February 24, 1874.

PROCEEDINGS OF SOCIETIES.

PATHOLOGICAL SOCIETY OF PHILADELPHIA.

THURSDAY EVENING, JANUARY 8, 1874.

THE PRESIDENT, DR. WILLIAM PEPPER, in the chair.

DR. C. B. NANCREDE read the history of a case of *sarcoma*, for which see current number of the *Times*.

Dr. J. E. MEARS presented a specimen of a heart showing marked *disease of the mitral and aortic valves*.

The specimen was removed from a patient of Dr. R. Taylor, with whom Dr. MEARS saw the case in consultation.

The patient had been confined ten days previous to the attack. On that day she was exposed to cold, and symptoms of pulmonary congestion rapidly manifested themselves. The heart's action was markedly increased, the pulse attaining 130 beats per minute.

On auscultation, *no mitral murmur* could be detected. The pulmonary sounds and the extremely rapid movement rendered the aortic murmur very indistinct,—almost inappreciable. Arterial sedatives were employed without effect, as well as remedies both internal and external to relieve the congestion; the patient dying on the second day of the attack, from exhaustion.

Post-mortem examination revealed disease of both mitral and aortic valves. A mass, apparently of vegetations, covered the auricular surfaces of the mitral valves, leaving an opening between the auricle and ventricle about the size of a crow's quill. The nature of this mass was not determined by microscopic examination. The aortic valves exhibited structural changes, but to a much less extent.

A question of clinical interest presented itself in reference to the absence of a mitral murmur, with the valves in the condition observed, and with the extremely rapid action of the heart.

Dr. O. C. ALLIS presented a specimen of *intra-capsular fracture of the femur*, occurring in a female 77 years of age, who had fallen on the sidewalk. The usual symptoms were present, though crepitus was too indistinct to be of value in diagnosis.

The person survived the injury but fourteen days.

The specimen represents the fracture as being, *in front*, about half an inch above the *anterior inter-trochanteric line*; *behind, midway of the neck*. A reflection of the capsular ligament posteriorly holds the head of the bone to the shaft.

Dr. JAMES TYSON presented the specimens from a case of *advanced mitral disease of the heart, conjoined with disease of the kidneys*, derived from a married woman, aged 34, who died under his care at the Philadelphia Hospital. There were ascites, general oedema, and abundant albuminuria on admission, accompanied by oil-casts. The albuminuria and casts disappeared under treatment, but the signs of cardiac disease continued, and, although the oedema diminished, much of it remained. She died of acute intercurrent pleurisy with effusion, previous to which there had been no hydrothorax.

On post-mortem examination the mitral leaflets were found to have coalesced, forming a mere button-hole opening, the edges of which were rigid from calcareous deposit, and therefore incapable of closure.

The epithelium of the convoluted tubules was in many places fatty, but in others only slightly altered.

From the history of the case, the extent of the disease, and the abatement in the renal symptoms, as well as the somewhat limited degree of the alterations in the kidney, the doctor thought the cardiac disease primary, and the renal affection secondary.

A full report of this case, which contains many points of extreme interest, will be published in a clinical lecture in a later number of the *Times*.

The PRESIDENT said that such extreme degrees of mitral obstruction from coalescence of the leaflets of the valve comparatively rarely make their appearance in adult life. More frequently the symptoms show that the lesion dates back to an early age, and it is probable that in some cases it may arise during fetal life.

In regard to the absence of albuminuria during the latter part of the case just reported, he referred to an autopsy made the day previous on a patient whose clinical history presented some points of resemblance. The man was about 70 years of age, and presented evidences of eccentric hypertrophy of the heart, with slight insufficiency of the mitral valve. This was associated at various times with oedema, ascites, and hydrothorax. Paracentesis of the chest had been performed with very great relief, which lasted over eighteen months.

For a period of four years, during which the patient was under his observation, there was never evidence of albuminuria. From the appearance of the man, however, and the fact that he was passing large quantities of urine of low specific gravity, the existence of a contracted kidney was suspected. At the post-mortem examination there was found advanced cirrhosis of both kidneys, which had never revealed itself during life, except by the symptoms mentioned above.

MEDICAL SOCIETY OF THE COUNTY OF ALBANY, NEW YORK.

SEMI-MONTHLY MEETING, JANUARY 28, 1874.

DR. JOHN SWINBURNE, PRESIDENT, in the chair.

ACEPHALOUS MONSTROSITY.

DR. L. R. BOYCE presented a specimen of an acephalic monster. The woman who gave birth to it is the mother of five children. She had also aborted

once from ill health, probably due to hard work and exposure.

The present foetus was cast off at the seventh month. The ill health of the mother commenced two or three years ago, and has continued to the present time. She was in labor two and a half hours, passing through it without difficulty.

The foetus presented a lack of development of the head, the brain being wanting. There is also a spina bifida and hare-lip. The cause for this undeveloped condition was sought in defective nutrition, due to the poor health of the mother.

Dr. LEVI MOORE remarked that he had a similar case several years ago. The parents were both healthy, and healthy children have been produced by them, both before and since the birth of the monster.

Dr. THOMAS BECKETT said that he had also met with a case of the same nature. In his case there was an enormous secretion of the liquor amnii,—a bucketful. The same has been observed by others, and the cause of the monstrosity has been looked for in an abnormal condition of the amniotic membranes.

RUPTURE OF THE HEART.

Dr. LEVI MOORE presented a case of rupture of the heart.

The patient had been subject for many years to stricture of the urethra, rendering micturition slow and painful. Four weeks before his death he began to suffer severe pain in the left side and shoulder, which was aggravated by exercise. He had also occasional attacks of dyspnoea. No organic lesion of the heart could be detected. Anodynes, nutritive diet, and absolute rest improved his condition for a time. After taking a short walk he experienced great fatigue and a return of pain; and, after passing a restless night, he died suddenly while seated in a chair.

At the autopsy there was found a rupture of the left ventricle, near the base. The pericardium was distended by a large clot and about six ounces of serum. The tissue of the heart was pale and flabby. The right pleural cavity contained sixteen ounces of serum.

Dr. MOORE mentioned the various causes and conditions of rupture of the heart, and remarked that while rupture in most cases takes place suddenly, causing immediate death, in others, of which the one presented seems to be a specimen, there is a gradual yielding, going on for weeks, until rupture finally becomes complete.

Dr. BECKETT mentioned a case of rupture of the heart occurring in the person of a man who had always been healthy, and was found dead in bed, no extraordinary muscular exertion having been made. The rupture occurred in the right auricle, and the valves were almost completely calcified; his age was 50.

Dr. JOHN V. LANSING presented a case which he had recently met with; the patient, a man aged 74, who had been previously in good health, was taken at four o'clock A.M. with præcordial pain and dyspnoea, the pain passing down both arms to the fingers. Ether, carbonate of ammonia, and hypodermic injections of morphia were administered. He died next day while at stool. A large rent was found an inch from the apex of the right ventricle. There had been an apoplectic effusion about the point of rupture. The coronary arteries were atheromatous, and one was involved in the rupture. The heart weighed two pounds, and its tissues were fatty. It was invested by a firm coagulum.

It would seem in this case that the heart began to give way when the first symptoms came on. What was the cause of the rupture? It is usually associated with violent exertion, which could not have been the case here. Can it not take place from muscular contraction of the organ, a fatty condition being presupposed?

What is the cause of death in rupture of the heart? Is it pressure on the organ, or shock, or loss of blood from the circulation? All would seem to contribute in causing death.

The heart is sometimes subjected to great pressure by pericardial effusion without fatal issue.

Dr. LANSING remarked the fact that there was no serum, but simply a firm clot in the pericardium. In all the cases he had seen, the same condition was found.

Dr. C. D. MOSCHER spoke in regard to the cause of death in rupture of the heart: he mentioned a case of rupture of the aorta within the pericardium, in which the blood was probably escaping into the pericardium for about ten hours. The patient, having eaten freely, was taken with a disagreeable feeling and with pain, which were ascribed to indigestion. When seen, a few hours before death, he was laboring under dyspnoea, nervous excitement, exhaustion, and syncope.

A quart of solid and fluid blood was found in the pericardium, practically obliterating all the cavities of the heart. The interference with the action of the heart, and the loss of so large a quantity of blood from the circulation, were quite sufficient to cause death.

Dr. JAMES S. BAILEY also reported a case of *rupture of the heart*.

It occurred in the person of an elderly female. She had been affected for years with dyspnoea on exertion. Twenty-eight hours before death she was taken suddenly with syncope, and complained of a tearing sensation about the heart. Her countenance was blanched; pupils dilated; pulse scarcely perceptible, and no heart-sounds distinguishable; skin cold. There was found a rupture of the ascending aorta, half an inch above its origin; the internal coat being first perforated and dissected up a short distance before tearing through of the external coat took place. There was about a pint of solid and fluid blood in the pericardium.

Dr. VANDERVEER also reported a case which was very similar; the inner and outer coats of the aorta being ruptured in like manner at different points, and dissected up. He gave the details of another case, in which there was rupture of the left ventricle near the base. The patient, having felt perfectly well on rising in the morning, was taken with severe abdominal pain following the use of an enema to which he was accustomed. While suffering from this he was taken with pericardial pain, and died suddenly.

A third case, like the second in many respects, was also detailed.

Dr. J. H. BLATNER then read a paper on Cases in Obstetric Practice. (See Original Communications, p. 356.)

Dr. JAMES L. BABCOCK presented a somewhat unusual case of passage of a large piece of bone per anum. It came under his notice at the Almshouse Hospital, in a man coming from a distance, who claimed to be suffering from piles. He was very weak, and could not walk. Upon examination, he found the parts swollen, inflamed, and tender. Upon introducing his finger, he felt a hard body, which he succeeded in withdrawing. It was a piece of bone one and a half inches long by half an inch wide, which had become lodged in a cul-de-sac above the sphincter ani.

COLOR-TEST FOR CHLORAL HYDRATE.—If we agitate chloral hydrate with essence of mint, the mixture becomes rose-color, and by degrees a deep red. Boiling does not destroy this color, and sulphuric acid renders it even more intense. M. Carl Jehu says that neither the other oxygenated essences nor the simple hydrocarbons produce this reaction.—*Medical Press and Circular*.

REVIEWS AND BOOK NOTICES.

HISTORY OF THE AMERICAN AMBULANCE ESTABLISHED IN PARIS DURING THE SIEGE OF 1870-71; TOGETHER WITH THE DETAILS OF ITS METHODS AND ITS WORK. By THOMAS W. EVANS, M.D., etc. London, 1873.

The American ambulance during the French war was simply a tent-hospital, in which were treated during the entire period two hundred and forty-seven surgical and twenty-four medical cases. When we first compared this record with the goodly quarto of nearly seven hundred pages, we involuntarily exclaimed, "Behold how great a matter a little fire kindleth!" As, however, it certainly is allowable for the man who has honestly earned his fortune to spend a portion of it in raising to himself monuments of paper and ink, we find no fault with the author, who has intrusted to the Chiswick Press that task which others assign to the sculptor's chisel or the painter's brush. Indeed, we congratulate the doctor upon the wisdom of his choice, for in the fragile material of a quarto the modern arts furnish that which shall last when the granite has crumbled into clay or the bronze has been corroded into shapelessness. We do not mean to deny value to the book. Just as some of the fairest creations which have ever shot new rays of beauty across the world have been due to the longing for immortality of some one poor in genius but rich in pelf, so may the printed monument have much of literary and scientific value. In looking into the book, we find that Dr. Evans differs from most of those who seek immortality at the point of the chisel, in that he has himself made at least the pedestal upon which his monument rests, since one hundred pages out of the seven hundred are partially his pen.

Space is wanting us to follow the fortunes of the really most praiseworthy efforts of the noble band of Americans to relieve the frightful suffering of the siege. Taking upon themselves the unknown perils of war, and, it might have been, of assault and sack, enduring privations, performing great and unpaid labors, risking their lives freely in the van of the battle,—they deserve the epitaph which is said to rest upon a tombstone of an American volunteer in Greenwood Cemetery: "The only son of a widow. 'She hath done what she could.'"

After examining the record, we judge that Dr. Evans bore the same relation to this work that he appears to have done to the volume before us: he largely *paid* for it, *i.e.*, for the medicines and running expenses. Certainly the sad days of the siege were spent by him in "Merrie England;" he having accompanied the Empress Eugénie in her flight, and "lingered in London" when the air was full of dark, unwholesome rumors of coming doom for the heroic city of Paris. Why should the prince of dentists risk that person and those fingers which had hung over and carved the molars, incisors, and premolars of so many crowned heads? Certainly this precious personage should be preserved at all hazards. Dr. Evans was wise. Dr. Evans was right.

The body of the book is made up of a well-written, very learned, and elaborate essay, by Dr. Edward A. Crane, upon the history and functions of army hospitals, and the use of tents: an essay which would have been a most excellent work in the antediluvian times, when a man could afford to dawdle one hundred years over the life of a gnat, but which at present would be improved by that minifying-glass known as an abridgment.

In concluding our brief notice of this monument to the aristocratic American dentist, we remark that the Chiswick Press has done its work well: the clean type,

black English ink, fine paper, and wide margins are all that even Dr. Evans could wish.

THE STUDENT'S GUIDE TO SURGICAL ANATOMY. By EDWARD BELLAMY, F.R.C.S. Philadelphia, Henry C. Lea, 1874.

This book, as stated by the author in his preface, is intended for the use of advanced students, either as a guide for operative surgery, or for candidates for medical degrees who need to refresh their anatomical knowledge previous to final examinations. The work is only a compilation, but contains much valuable information in a concentrated form. More distinctness in some of the illustrations would have added to their value.

DU TRAITEMENT DES RÉTRÉCISSEMENTS DE L'URÈTHRE PAR LA DILATATION PROGRESSIVE. Par T. B. CURTIS, of Boston, Mass. Paris, J. B. Baillière et Fils, 1873.

In this essay, to which was awarded the Civiale prize for the year 1872, Dr. Curtis enters most freely into the subject of the treatment of stricture of the urethra by gradual dilatation. His observations were made while he was a pupil of M. Guyon, and at the close of his essay are given full notes of seventy cases of stricture treated by progressive dilatation. After defining the various methods of dilatation, giving the indications and contra-indications for the use of this method of treatment, and stating the complications likely to arise during its use, Dr. Curtis gives the following conclusions:

1. Progressive dilatation is a satisfactory method for simple stricture not of traumatic origin, in which no previous treatment has been employed.
2. It is almost absolutely without danger.
3. Its average duration—twenty-eight days—is not much above that of other methods, especially if the time devoted to preparatory and consecutive precautions is taken into account.
4. It does not confine the patient to bed.
5. Relapses are not more frequent than after other methods.
6. As the cure by this method is a gradual one, it is not applicable to those cases in which there is urgent need to re-establish the flow of the urine.
7. In cases of irritable or elastic strictures this treatment is not applicable.
8. Chronic alterations of the kidneys usually offer a contra-indication for this treatment.
9. The treatment of stricture by permanent dilatation is not a method which is generally applicable.

PRESERVATION OF ORGANIC SUBSTANCES BY MEANS OF FUCHSINE.—Gelatin putrefies with the greatest facility at a temperature of twenty-five degrees, forty-eight hours only being required for it to become covered with mould, to liquefy, and undergo complete decomposition. If to a solution of gelatin is added a fifth part of fuchsine, it can be preserved in the open air during an indefinite period. A piece of beef weighing fifty grammes has been enveloped in blotting-paper moistened with a solution of a hundredth part of fuchsine. This piece of meat has been exposed to the air for several months, and has as yet undergone no alteration.

Urine to which one forty-thousandth part of aniline violet had been added was placed in a test-tube in contact with the air, and at the end of six months had undergone no putrefaction.—LANJEROIS, *Revue de Thérap.*, No. 9; *The Western Lancet*.

GLEANINGS FROM OUR EXCHANGES.

TRACHOMA TREATED BY GONORRHOEAL INOCULATION.—Dr. Léon Brière reports in the *Bulletin Générale de Thérap.*, September 15, 1873, four hundred and four cases, from various sources, of pannus treated by the inoculation of blennorrhagic virus, derived either from the ophthalmia of the new-born, or from urethral or vaginal blennorrhagia. To these he adds five cases in his own practice. Having quoted with approval the conclusion of Roosbroeck, who has never seen any grave accident follow so seemingly frightful a plan of treatment, and who observes, "I regard these results as so complete, so marvellous, and so extraordinary, that I do not believe anything more beautiful exists in all ophthalmology," the author sums up in the following indications and contra-indications:

1. Inoculation gives results satisfactory in proportion as the pannus has arrived at a very high degree of development (without incurable complication on the ocular surface). 2. In pannus which is generalized over the whole surface of both corneæ, accidents are most rare. 3. Inoculation must never be practised in cases of unilateral pannus, as the most scrupulous care of the sound eye will not save it from contagion. 4. Inoculation is equally contra-indicated where the pannus is partial and where the cornea presents points. 5. In cases of double pannus, it is preferable to inoculate both eyes at the same time. It is a matter of indifference whether the inoculating matter be taken from an ocular, vaginal, or urethral blennorrhagia. An individual refractory to the influence of one kind may be affected by another virus, seemingly less active. The pus of acute urethral blennorrhagia is more active than that of the chronic disease. The material of inoculation should be picked up with a pair of forceps and deposited upon the palpebral conjunctiva. If its escape be feared, the conjunctiva may be punctured with a lancet or needle. The course of purulent ophthalmia of artificial induction is the same as that of accidental origin. Should the cornea not ulcerate, frequent applications of warm water should be made. Van Roosbroeck lets the affection take its own course. Should the cornea exfoliate (intense pain), Warlomont recommends the application of the nitrate of silver, in stick or solution.—*New York Medical Record.*

CONGENITAL STRANGULATED HERNIA IN AN INFANT (*British Medical Journal*, January 3, 1874).—Dr. Robert Somerville reports the case of a healthy boy, aged ten days, who, in the middle of the night, was seized with an attack of vomiting. It was soon after observed that he had a considerable tumor in the scrotum on the right side. There was no fever, and no unnatural fulness in the abdomen, but the vomiting persisted.

On examining the scrotum, it was evident enough that the swelling was an inguinal hernia. The testicle of the right side was felt in contact with the protruding end of the hernia, but the cord could not be made out, being lost in the tumor. On the left side both the testicle and cord were found in good condition. The handling of the hernia caused a good deal of pain to the child, so that taxis was not much persisted in, and was quite unavailing. At the same time, the symptoms did not seem very urgent; and, as the tumor was not so large as when first observed, it was decided to wait, enemata being administered, and carminatives being used to prevent the child's crying. In the evening the tumor was somewhat less than in the afternoon, and the child was easier, though the hernia could not yet be reduced, and there was no action of the bowels. Next morning the hernia was gone. The bowels had acted during the night, and the vomiting had ceased. With the exception of slight feverishness, which passed

off during the course of the day, the child was quite well.

No doubt the hernia was congenital and strangulated. Its rare occurrence at such an early age, and its spontaneous cure, seem to make it worthy of record.

CASE OF OVARIOTOMY (*New York Medical Journal*, February, 1874).—Dr. Charles H. Richmond reports the case of a married woman, 24 years of age, who consulted him concerning the continuance of the catamenia, which were regular, although she supposed herself to be six months advanced in pregnancy. It was found that she had an ovarian cyst. She was tapped once to relieve the abdominal distention, and finally, two years after the first appearance of the tumor, she was operated on in the usual manner, being anesthetized with bichloride of methylene. On reaching the peritoneum, that membrane was found congested and thickened, and it bulged through the wound, indicating the presence of free fluid within its cavity. It was laid open on a director, and a large quantity of serum escaped.

The tumor was found to weigh twenty or twenty-five pounds, and to have extensive pelvic and intestinal adhesions. It was then enucleated, the operation being concluded in thirty-eight minutes. Only one artery was tied, and the oozing which followed was controlled by the free use of persulphate of iron.

Fever, vomiting, and tympanites continued for a few days subsequently, indicating some peritoneal inflammation, the patient being sustained by brandy, iced champagne, and enemata of beef-tea and quinine. After seven or eight days a serous discharge occurred near the pedicle, and about the fifteenth day became purulent and offensive. From the seventeenth to the twenty-fifth day considerable quantities of black, membranous sloughs were discharged through the opening near the pedicle. In a week or two more this discharge ceased, and soon after the patient completely recovered.

A NEW SOLVENT OF PHOSPHORUS (*American Journal of Pharmacy*, January 1, 1874).—Mr. A. W. Gerrard has found that resin—"the residue of the distillation of the turpentine"—is capable of dissolving four or more per cent. of phosphorus. He melts the resin, and, while it remains fluid, adds the phosphorus, a piece at a time, and in the proportion of four of the latter to ninety-six of the former. The bottle, during this process, should be kept in a sand-bath at a temperature between 200° and 210° C. He calls the resulting substance phosphorettered resin, and suggests the following formula for its exhibition:

R Phosphorettered resin (4 per cent.), 25 grains;
Powdered white sugar, 75 grains;
Tincture of Tolu, a sufficient quantity.

Pulverize the resin, mix with the sugar, and form into a mass with tincture of Tolu,—eight to ten drops are sufficient,—then divide into twenty pills; each pill will contain one-twentieth of a grain.

EMPLOYMENT OF METALLIC MERCURY (*The Lancet*, January 10).—Dr. Kirchstein relates a successful case of the above. The patient was a robust fisherman, subject to cramps in the stomach. There was complete obstruction of the intestinal canal, with tympanites, fecal vomiting, etc. All the usual external and internal means proved unavailing. After five days, and when the prognosis became most grave, Dr. Kirchstein thought of metallic mercury, and two tablespoonfuls, at half an hour's interval, were administered in the evening. The vomiting soon ceased, and towards the morning the patient passed a great many hard, charcoal-like scybala. He rapidly recovered. During the three weeks following, evacuation of globules of mercury was observed.

DOUBLE SPLEEN AND KIDNEYS (by Surgeon-Major G. W. Jameson, Civil Surgeon, Ghazee-pore).—The following is an extract from the notes of a post-mortem examination performed on the body of Bickhoo, resident of the city of Ghazee-pore, on the 28th of October, 1873.

In addition to one healthy well-developed spleen, there was a *second* similar one, connected with the abdominal vessels by separate communications of its own, and situated between the ordinary spleen and the liver. The smaller was of a roundish shape, and had a distinct hilus.

Weight of first spleen, 9 oz. 1 dr. 6 gr.

Weight of second spleen, 1 oz. 1 dr. 30 gr.

Besides the above abnormality, there were four kidneys: two of these were well developed, healthy, and in the usual situation, while the second pair were small, intensely inflamed, and situated lower down than the other.

The four kidneys had each their separate arterial and venous attachments and ureters.

Weight of the two normal kidneys, 5 oz. 4 dr.

Weight of the two smaller kidneys, 1 oz. 4 dr. 24 gr.

The bladder was exceedingly small, walls much hypertrophied, and the mucous coat somewhat inflamed.

No calculus in bladder or urethra, and no stricture.

The mucous coats of both large and small intestines were inflamed and ulcerated.

Tissues infiltrated, and abdominal cavity filled with dropsical fluid.

Blood unusually fluid, no coagulum in any part of body; all the other organs tolerably healthy in appearance.—*The Indian Medical Gazette*.

ELECTRICITY IN PARTURITION.—Dr. Ulisse Martemucci (*Lo Sperimentale*) says that already in 1871 he had used electricity as an important assistant in cases of labor with uterine inertia, when ergot or rye had failed.

The method consisted, in one case, in applying the induced current, placing one electrode, with a moist sponge, on the right side of the abdomen, at the level of the umbilicus, and the other, also with a moist sponge, on the left, running over the abdominal muscles, first with the one and then with the other. In fifteen minutes the fetus was expelled, dead, without the use of forceps, which are always dangerous. In the *Gazzetta di Torino*, 1873, he reports two other similar cases, in both of which the children were born in the best condition of health. Also, in eight other cases he succeeded without the use of ergot. He observes that the labor takes place much more rapidly thus than when ergot is used, and that in these eight cases he never lost one fetus; whilst with ergot he lost one in four. Hence he derives the following corollaries. 1. By using electricity, the obstetrician has in hand a method of causing the cessation of uterine contractions whenever he chooses; whilst, when ergot is used, the action is constantly kept up. 2. When ergot is used, it is necessary that the labor should be speedily finished, on account of the feticidal properties of the drug, because the fetus and placenta are so compressed as to make circulation difficult. 3. By the electric current, also, the obstetrician can leave off by turns, and again recommence the uterine contraction, which he cannot do in cases where ergot is used.—*The Doctor*.

CHLORAL IN CHOLERA.—In a report of nineteen cases of cholera treated by the hypodermic injection of chloral, contained in *The Indian Medical Gazette* of January 1, 1874, Dr. F. W. Higginson concludes as follows:

"An analysis of the treated cases shows that 89 per cent. of the entire number recovered; seven of them were in intense or severe collapse; two died; seven

were in mild collapse, all of whom were cured. In the others, collapse was warded off. The hypodermic injection was the sole treatment employed; the patients were supplied with cold boiled water to drink *ad libitum*: they were nearly all exceedingly poor, living in wretched huts. During their convalescence, the only nourishment they could afford was a very limited quantity of milk. The immediate beneficial effects of the remedy cannot be better described than by the expression so often used by my patients, 'I feel more life in me.' No ulceration whatsoever occurred where the injection had been made, a slight sensation of pain and hardness being all that resulted."

ECTROPION VESICÆ WITH EPISPADIAS (*The Lancet*, February 7, 1874).—At a meeting of the Royal Medical and Chirurgical Society, Mr. John Wood showed two cases which had been operated on with success by his plastic method. Two plastic operations had been performed on each. The first consisted of a reversed flap of skin taken from the umbilical region, large enough to cover the exposed bladder, and turned down with its skin-surface towards the mucous membrane. The skin of the flap was in this situation quite devoid of hair, as is usual in these cases. Two other flaps of a lancet-shape were then taken, one from each groin, with the bases downwards, and placed upon the raw surface of the reversed flap. They were held together by harelip-pins and wire sutures. The second operation was effected by the transplantation of the anterior three-fourths of the scrotum from below the malformed penis to its upper surface, covering in the urethral epispadiac groove and forming a very complete prepuce, through and under which the urine flows, and completely enveloping the glans penis above and at the sides.

The result was highly satisfactory in both cases, and the patients were about to have a shield made with an india-rubber urinal attached, to fix on the restored penis and fasten to the leg, and thus enable them to keep dry and comfortable.

HEPATIC EMBOLUS (*The Lancet*, February 7, 1874).—Mr. L. W. Marshall reports the case of a laborer, æt. 21, who was crushed between two wagons. When he came under observation he was suffering severely from shock, and death ensued forty minutes after the occurrence of the accident. On the post-mortem examination the right clavicle and all the ribs on both sides, at their junction with the costal cartilages, were found to be fractured, the sternum, however, being uninjured. The peritoneal cavity was filled with blood, and on throwing back the abdominal parietes a long rupture was seen to pass nearly through the substance of the liver at the junction of the two lobes. The diaphragm was also torn at the upper part. On examining the heart, the right cavities were found to contain some clots, the left being empty and contracted. There was no valvular mischief. In the pulmonary artery, lying immediately in front of the valves, and almost filling the arterial tube, was found a piece of liver, conical in shape, and weighing a drachm.

The fact of a patient living for forty minutes after the receipt of such an extensive injury is remarkable; but that he should have lived so long with a piece of liver, which must have passed through the right side of the heart, fixed in the pulmonary artery, is truly surprising.

CASE OF LUMBAR HERNIA (*New York Medical Journal*, February, 1874).—Dr. W. N. Campbell reports the case of a boy, æt. 4 years, who, eighteen months previously, had suffered from an abscess in the left loin between the crest of the ilium and the last rib. It had been lanced and poulticed, and had continued to discharge until about a month before he came under ob-

servation. Then another tumor made its appearance at the point where the quadratus lumborum and latissimus dorsi intersect the external and internal oblique muscles. It became the size of a goose-egg, was soft and fluctuating to the touch, resonant on percussion, and could be reduced by performing taxis forward and inward, reappearing upon the patient's coughing or making muscular exertion. It was diagnosed to be a lumbar hernia, due, probably, to a disintegration of the muscular fibres of these muscles, owing to the long-continued discharge from the abscess.

LIGATURE OF THE CAROTIDS (*Detroit Review*, February, 1874).—Dr. Longworth draws the following conclusions respecting the therapeutic value of the several operations on the carotids:

1. Ligature of the common carotid is the widest in its application, but most dangerous and least efficient.
2. Ligature of the external carotid, below the digastric and stylo-hyoid muscles, is more limited in its application, but less dangerous and more efficient.
3. Ligature of the external carotid, above the digastric and stylo-hyoid muscles, is the most restricted in application, but also safest and most effectual.
4. Ligature of the external carotid on both sides has hitherto been uniformly successful, and is the most efficient measure at our command for arresting the distal circulation.

A KNIFE SWALLOWED, AND PASSED THROUGH THE ABDOMINAL WALL AFTER AN INTERVAL OF NINE WEEKS.—A female, 26 years old, during an attack of delirium tremens, swallowed a dessert-knife, the metal part of which measured six inches and a half. Eight weeks later a globular swelling made its appearance in the right side, nearly on a level with the umbilicus, and the sharp edge of a foreign body could be felt distending the skin, which was freely movable over the tumor. After some days the blade of the knife protruded through the skin, and was easily removed by slight traction without additional incision. The ivory handle had been entirely digested, and the extremity of the blade was rendered very thin by the action of the gastric juice. The nervous shock was considerable at the time of the removal of the offending body, but a good recovery was made without the formation of a gastric fistula.—*Liverpool and Manchester Medical and Surgical Reports*, 1873; *The Clinic*.

TETANUS NEONATORUM (*Boston Medical and Surgical Journal*, February 12, 1874).—Dr. Hüttenbrenner has drawn the following conclusions as the result of recent clinical experience:

1. Tetanus is not an absolutely fatal disease.
2. It can run through its course with or without fever. Those cases running a rapid course with high fever are the result of a general poisoning of the blood, whilst those cases without fever are to be regarded as of reflex origin and due to some peripheral irritation.
3. The cases without fever have a more favorable prognosis, although where the fever is high the prognosis is not absolutely a fatal one.
4. Chloral hydrate is by no means a specific, but is a remedy preferable to all others: (a) because it is a pure hypnotic; (b) because it has no unpleasant after-effects, as morphia has, causing hyperæmia of the brain; (c) because it is easily administered, and a cumulative action is very rare.

TEMPERATURE IN CASES OF INJURY OF THE SPINAL MARROW (*Irish Hospital Gazette*, February 2, 1874).—In consequence of numerous pathological observations and physiological experiments, Dr. A. H. Corley has arrived at the following conclusions: 1. There is a heat-regulating region of the cord, extending probably from the third cervical to the upper dorsal vertebræ.

2. This function resides in the gray matter. 3. The effects of injury differ, a simple lesion giving negative results, while a continual irritation produces thermal symptoms. 4. Nearly all the phenomena of ordinary fevers may be explained by an irritation, such, for example, as a blood-poison, acting in this particular region.

GALVANO-EMESIS.—Emesis may be produced by means of electricity, when other means fail or are impracticable. It may be brought about by introducing an electrode into the upper part of the œsophagus, and applying the other over the epigastric region. Dr. Fox relates a case, in the *British Medical Journal*, in which a child was brought to him in an asphyxiated state from eating poisonous mushrooms. He applied the current as above prescribed, and vomiting ensued immediately.—*Western Lancet*.

TRAUMATIC TETANUS.—**CALABAR BEAN.**—**DEATH.**—Dr. Charles B. Brigham reports (*Western Lancet*, February, 1874) a case of tetanus following wounds of the scalp and finger, in which death occurred in spite of the use of spinal ice-bags, chloroform, Calabar bean, and the continued galvanic current.

MISCELLANY.

A NATIONAL BOARD OF HEALTH.—The Congressional House Committee on Commerce, on January 28, authorized the chairman to report the bill to prevent the importation of contagious or infectious diseases into the United States.

It provides that the surgeon-generals of the army and navy, and the supervising surgeon of marine hospitals, of the Treasury, shall constitute a board of health, with the power to establish and enforce such rules and regulations as are necessary to prevent the importation of contagious diseases; and the regulations, when approved by the President, shall have the force of law. It does not allow any interference with State or municipal regulations.—*Medical and Surgical Reporter*.

THE Lepus Bairdii is a peculiar species of rabbit which is found in the mountains near the Three Tetons of Wyoming and the heads of the Snake River and the Missouri. One of its peculiarities is the habit which the males have of suckling the young. Numerous specimens of this sex were obtained by the naturalists of Hayden's geological survey of 1872, with well-developed teats and mammary glands filled with milk.

GUM camphor and hydrate of chloral, when mixed together in equal proportions, are converted, in the course of a few days, into a clear, colorless liquid.

NOTES AND QUERIES.

PHILADELPHIA COUNTY MEDICAL SOCIETY.

THE next meeting will be held Wednesday, March 11, 1874, at 8 o'clock P.M.

The subject before the meeting will be "The Philadelphia County Medical Society."

The paper will be read by Dr. L. J. Deal.

All regular practitioners of medicine are invited.

SATURDAY, MARCH 14, 1874.

ORIGINAL COMMUNICATIONS.

ON THE LOCAL TREATMENT OF PULMONARY CAVITIES BY INJECTIONS THROUGH THE CHEST-WALL.

BY WILLIAM PEPPER, M.D.,

Professor of Clinical Medicine in the Hospital of the University of Pennsylvania.

FOR some weeks past I have been experimenting with a mode of treating pulmonary vomicae, which, so far as I know, has not hitherto been employed, and which has yielded results that, although as yet very imperfect and crude, seem to me to have an important significance. During the last year and a half, reiterated failures in the treatment of pulmonary phthisis in the stage of softening, with formation of cavities, either by general medicinal agents, by inhalations, or by change of climate, have led me to think constantly of the possibility of bringing powerful remedies into immediate contact with the diseased tissues by injecting them through the chest-wall. Circumstances have prevented me from putting the resolution I had formed into effect until recently; but the attempts I have made show so conclusively the simplicity and harmlessness of the treatment adopted as to induce me to publish a brief account of them. It is evident that the therapeutic value of this local treatment can be determined only by repeated and prolonged trials.

Case I.—W. S., æt. 29 years, by occupation a metal-polisher, has been in my ward in the Philadelphia Hospital for some months. His father worked in the same factory, and died of phthisis, as did his mother and one of his brothers. At the age of eleven years he was confined to bed for eleven months with coxalgia, which left him lame. Since then he has enjoyed general good health until August, 1872, when cough began, and was soon accompanied with muco-purulent sputa. In October, 1873, he had a slight attack of hæmoptysis. After this his general health, which had not been much affected before, began to fail rapidly; he lost flesh and strength, had marked hectic, and greatly-increased dyspnœa. There was much pain over the right apex, troublesome cough, and abundant purulent expectoration. There was no recurrence of hæmoptysis, but his condition remained about the same, with occasional fluctuations, until the early part of the present year, when he suffered severely with increased cough and hectic. On February 17, 1874, his condition was found to be as follows. He is much emaciated, and is very easily fatigued. There are no marked digestive symptoms. His breathing is very short, and this is much increased by exertion, so that it is difficult for him to ascend a single flight of stairs. His cough is painful, exciting pain especially on the right side of the chest, but is not very severe at present, and is attended with but a moderate amount of purulent expectoration. The frequency of the pulse is somewhat variable: at present it is 108.

Upon physical examination, the chest is found to be chicken-breasted. The physical signs on the left side are normal, save some roughness of the respiratory murmur, and a few crackling sounds at the apex.

On the right side there is tympanitic resonance, even on light percussion, from the clavicle down to

the fifth rib; the most marked (amphoric) tympany is heard at the middle of the second interspace. There is cracked-pot sound for two and a half inches to the right of the sternum from the second to the fifth rib. Auscultation reveals blowing breathing on inspiration and expiration over this whole area,—the character of the blowing, however, varying at different points. Over the seat of cracked-pot sound it is very superficial and is rather shrill and high-pitched, and accompanied with large, moist, and gurgling râles. Outside of the line of the nipple it is larger, lower-pitched, and free from râles. There is intense pectoriloquy over this entire area.

His treatment has been very varied, but without any permanent relief, and the course of the case has been gradually downwards. On February 20, the No. 1 needle of Dieulafoy's aspirator, with the syringe attached, was introduced to the depth of about one inch in the second interspace on a line with the right nipple. He complained merely of a slight sensation of tingling and numbness, extending down the right arm. There was no cough excited, and not a drop of blood followed the puncture.

February 24.—The same needle was introduced at the point of the original puncture to the depth of one and seven-eighths inches, and was followed by the escape into the vacuum of a few drops of offensive watery pus. The needle was very tightly bound by the tissues through which it passed, but some motion could be imparted to its end, indicating that it was in a free space. Three or four minims of a mixture composed of liq. iodinii comp. gtt. ij to f3i of tepid water were then injected through the canula by a hypodermic syringe.

The operation was followed by loose, rattling cough, and the expectoration of about three fluidrachms of fresh, frothy blood. He was immediately put to bed, and the cough and hemorrhage soon stopped. His temperature in the evening and the following morning was only 99° F.

February 28.—The cough has been about as before; yesterday a trace of blood was mixed with the sputa. To-day the breathing-sounds over the right apex are very dry, scarcely any râles being heard. There is no external irritation around the seat of puncture. The same needle was again introduced to the depth of one and seven-eighths inches at the same point, and six minims of iodine-solution, of double the former strength, were injected. There was tingling pain down the right arm while the needle was in place, but no other symptoms attended or followed the operation.

March 5.—Since the last puncture, he has been feeling very comfortable. There has been no hectic; the cough is less severe, the sputa more scanty and whitish. He is bright and cheerful, and states that his dyspnœa is greatly relieved. The same needle was introduced to the same depth at a point one-eighth of an inch nearer to the sternum. The puncture was immediately followed by a rapid flow of fresh, frothy blood into the vacuum, about one and a half fluidrachms escaping. The pump was detached, and ten minims of iodine-solution were injected. He was put to bed immediately, but scarcely any cough, and no hæmoptysis, followed.

March 8.—The patient is brighter and more cheerful than for months past. There is no hectic irritation, the temperature never rising above 99° or 99.5°. The pulse ranges about 84. His breathing is so much relieved that he has walked up three long flights of stairs without much dyspnœa. The cough is but little troublesome, and only a few white, frothy sputa are raised. Auscultation shows that many of the râles formerly heard over the right apex have disappeared. There has also been some increase in flesh. All internal medication has been discontinued.

Case II.—John Wilson, æt. 35 years, born in Finland,

was admitted to my ward in the Philadelphia Hospital February 7, 1874. His family is subject to phthisis. He has been a seaman, and had enjoyed general good health until three years ago, when a short, dry cough began, with pain about the left apex. Muco-purulent expectoration soon commenced, followed by dyspnoea, hectic fever, night-sweats, and emaciation. Hæmoptysis first occurred in June, 1873, and since then he has several times raised small amounts of blood. For the past three months there has been much acute pain over the left apex, and his other symptoms have been aggravated. He is now much emaciated, and incapable of exertion.

Physical examination of the right side reveals nothing abnormal, excepting exaggerated respiratory murmur over the whole lung, with slightly prolonged expiration at the apex, and marked percussion-resonance. On the left side the respiratory movements are impaired. There is depression of the infra-clavicular region. Below the clavicle there is dullness on percussion down to the lower edge of the first rib; below this, down to the fourth rib, there is tympanitic resonance, with cracked-pot sound on strong percussion. There is also dullness over the apex posteriorly down to the spine of the scapula. Over the lower portions of the lung resonance is somewhat impaired as compared with the right side. There is loud amphoric breathing heard over the left apex as far down as the fourth rib; most marked in the second intercostal space above the nipple. There are also large and small bubbling râles over the rest of the lung anteriorly and laterally, with some weakness of the respiratory murmur. Posteriorly, above the spine of the scapula, loud bubbling râles are heard; and below, fine mucous râles.

There is increased vocal fremitus and distinct pectoriloquy over the left apex.

The No. 1 aspirator-needle was introduced about one and three-fourths inches in depth in the second intercostal space, about one inch outside of the line of the left nipple. There were the distinct signs of a cavity at this point, and the freedom with which the end of the needle could be moved about showed that it had entered a free space. A few drops of sanious fluid entered the vacuum; and seven minims of dilute Lugol's solution were injected. The operation did not cause cough or hæmoptysis, and was followed by no pain, acceleration of pulse, or elevation of temperature.

Case III.—James Hill, æt. 27, was admitted to my ward in the Philadelphia Hospital. His father died of phthisis; he himself enjoyed good health until November, 1871, when cough set in after an attack of rheumatism. It was at first dry, but later has been accompanied with purulent sputa. He first spat blood in July, 1872, and since then he has had quite frequent small hemorrhages. He has suffered much from pain in various parts of the right lung. He has had comparatively little hectic fever, but has lost much flesh and strength.

Physical examination shows contraction and comparative immobility of the right side; enlargement of the left side, with slight curvature of the dorsal spine, and deviation of the sternum. The left lung is hypertrophous and healthy. There are the physical signs of a quite large cavity at the right apex, with marked thickening of the pleura and partial induration of the lung below. The heart pulsates to the right of the sternum.

At a spot in the second intercostal space, half an inch outside of the line of the right nipple, there is deep-seated tympanitic resonance, which on strong percussion is amphoric with slight cracked-pot sound; cavernous breathing, both in inspiration and expiration, with bubbling râles with amphoric echo, and marked pectoriloquy for the spoken and whispered voice. The No. 1 aspirator-needle was introduced here to the depth of one and seven-eighths inches, and evidently entered a cavity. About seven minims of dilute Lugol's solu-

tion were injected. The operation produced a paroxysm of spasmodic cough, but was followed by no hæmoptysis or irritation.

The only point which can be said to be demonstrated by the above cases is the possibility of puncturing superficial pulmonary cavities and injecting into them small quantities of dilute solution of iodine. And when it is seen how simple is the operation, it can only be wondered at that it has not long since been attempted, and its value determined. In estimating its danger, it is to be borne in mind that in the majority of cases when this treatment, if found of real curative value, will be called for, there exist pleuritic adhesions which will prevent the development of pneumothorax, even if so minute a puncture of the pulmonary pleura as is needed would allow the escape of any noteworthy amount of air.

Again, in treating the lung-tissue in this way, we are quite free from any fear of ill consequences from admitting air to the cavity, since, of course, it is already filled with it. The puncture would generally be made at a point of the lung where there are no large vessels or bronchi, and in conditions of the lung-tissue where many of the blood-vessels are obliterated. In case of an injury to a very small vessel, further, it does not seem likely that any uncontrollable hemorrhage would ensue. Still, it is evident that the danger of hemorrhage, as well as the ability to control it by injections of astringents through the canula, are questions requiring further observations to settle. My own limited experience, and the general considerations I have suggested, lead me to regard the danger of serious hemorrhage as but slight, if the puncture be carefully performed.

If it be established that the operation may be performed with safety, it remains to be considered to what classes of cases it is most suitable; in what manner it may best be performed; what local applications can advantageously be employed by this novel method; and what curative results can be obtained by it. It is evident that it finds its most simple application in the treatment of superficial pulmonary cavities. We have here an ulcerated surface separated from the skin merely by the intercostal tissues, thickened pleura, and a layer of infiltrated and indurated lung-tissue. It is difficult to imagine any serious consequences which can follow the puncture of such a cavity with a delicate needle. In such cases of phthisis with vomica, moreover, all means of treatment hitherto adopted are proverbially ineffectual. To how great an extent this is dependent upon the constitutional nature of many forms of phthisis is well known. But, in the light of our more correct knowledge of the local origin of some cases of phthisis, it is probable that their incurable character depends in a great measure upon our inability to maintain the affected part at rest, and to bring in contact with the diseased surface suitable agents of sufficient strength to modify the morbid action. It is probable, therefore, that this mode of treatment will find one of its most successful fields of application in chronic non-tuberculous cavities in the lungs, in cases where the remaining lung-tissue has not become the seat of secondary tuberculous

formations. It is of course uncertain how much curative action we may be able to exert in such cases by any local application made through a canula. In the only case I have reported where the treatment has been continued long enough to produce any decided action, it is unquestionable that a certain degree of positive improvement has occurred both in general symptoms and local signs. And I am encouraged to hope that, with further experience, definite modes of treatment may be formulated which will prove of material benefit in this hopeless class of cases.

Further, I cannot see why, if it be not injurious to pass a delicate needle through the infiltrated wall of a cavity, we may not introduce it into the centre of superficial circumscribed indurations or caseous infiltrations of the lung-tissue, and make such injections as may tend to induce absorption or reparative action. Finally, it appears to me that we have in this mode of making local applications to the lung-tissue, a valuable means of treating some cases of severe hæmoptysis, especially when the hemorrhage proceeds from a well-defined seat of disease.

In regard to the mode of making the puncture, I have hitherto employed the finest (No. 1) of the needles accompanying Dieulafoy's aspirator, and have used it with the "previous vacuum" attached. For the first exploratory diagnostic puncture it is probably desirable to employ an aspirator, as it would also be if it were desired to empty such cavities before injecting them. But for the continuance of the treatment it will perhaps be quite as well to use a capillary canula, with trochar which can be withdrawn, so that a syringe can be fitted to the canula and the injection made. I have employed local anæsthesia by freezing, and have directed the patients to take a full breath and to hold it before the puncture was made. It will, however, be understood that my procedure is in all respects purely a tentative one thus far, and that, if this mode of treatment prove of value and worthy of pursuance, many improvements will undoubtedly be made.

The only fluid which I have as yet injected has been dilute Lugol's solution ($\mathfrak{M}\text{iv}$ to $\mathfrak{f}\mathfrak{3}\text{i}$), of which from four to ten minims have been injected. The entire absence of signs of irritation makes me confident that a larger quantity could be introduced without injury. This substance appeared suitable for the cases in which I have thus far operated. It is probable that other solutions, astringent or antiseptic, may be found preferable in some cases. In cases of local consolidations, solutions of iodine might also be expected to prove most beneficial.

I design employing a dilute solution of Monsel's salt for injection in suitable cases of serious hæmoptysis.

The practical value of this mode of treating pulmonary diseases is as yet uncertain. But it has appeared to me that, considering the almost hopeless nature of some of these lesions, the proof that a puncture may be made into the lung-tissue and remedial agents brought into direct contact with the seat of disease without any serious danger calls for a patient trial of it.

NOTE.—Since writing the above for publication,

I observed on Saturday, March 7, in both the *Medical Times and Gazette* for February 14, 1874, and in the *Medical and Surgical Reporter* for March 7, 1874, which reached me on that day, a reference to a paper published by Prof. Mosler, of Greifswald, in the *Berliner Klinische Wochenschrift*, upon the "Local Treatment of Cavities in the Lungs" by injecting certain drugs through the wall of the chest into superficial caverns, and leaving the canula in, so as to repeat the operation frequently at discretion. These two brief references are the only notices of Prof. Mosler's paper which have reached me; and, as no opportunity is afforded me for consulting the original at present, I am unable to say how far my independent observations may agree in results with his.

PHILADELPHIA, 1811 SPRUCE STREET,
March 9, 1874.

A CASE OF FIBROID TUMOR OF THE UTERUS WITH INTERESTING CLINICAL HISTORY—DEATH FROM PELVIC ABSCESS.

BY JAMES TYSON, M.D.,

One of the Visiting Physicians and Pathologist to the Philadelphia Hospital.

MISS R. B. W., æt. 36, had been under my observation socially, and, at intervals, professionally for trifling ailments, during more than ten years. Though she was somewhat nervous, and subject to violent sick-headaches, I can recall nothing bearing upon her last illness prior to July, 1873. On the 1st day of April, however, she sent for me, when I found her in a state of great nervous excitement, having just returned from a visit to a neighboring city, where she had been ill for several days, apparently from the effects of cold contracted during unusual exposure in travelling. The weather had been very severe, and she had been compelled to wait at night, in an exposed situation, the arrival of a train. The most prominent symptoms of this attack were a chill and very severe pain in the back, attended with some fever. She was appropriately treated; but there happened to be an epidemic of cerebro-spinal meningitis pervading the town in which she was staying, and while there she lost an intimate friend from this disease. The impression on her was a very powerful one, and she evidently conceived the idea that she might be suffering with this affection,—an apprehension which was encouraged by the remarks of friends who suggested that her symptoms were very like those of the disease in question. As soon as she was able, she came home, in the state of alarm referred to, and sent for me. After careful examination, finding no foundation for her apprehensions, I reassured her, saw her on each of two succeeding days only, and then discharged her in good spirits and apparent health. These are the well-known phenomena of an influenza; and yet I have thought best to record them, on account of the pain in the back and the exalted nervous symptoms then manifested, though I think it will appear that there was evidently no necessary relation between this illness and that of which she died.

A few days later she paid a visit to New York, where she remained more than a month, going about a good deal, and much enjoying her visit. On the 13th of July I happened to be calling socially at her home, when her sister informed me that Miss W. had not been well for several days, and asked me to see her. I learned that she was suffering with nausea and some

derangement of menstruation,—i.e., she had commenced to menstruate as usual, but the flow had ceased, reappeared slightly, and again ceased. She had always menstruated scantily, but had not suffered peculiarly at such times. She attributed this derangement to unusual exertion in walking on a very hot day. I recommended the repeated use of hot foot-baths, quinia, and a little blue mass at bedtime. It was evening, and my attention was not particularly attracted to her appearance. Two days later, on the 15th of July, she sent for me. I was then impressed with her appearance. She was pallid, wan, and had evidently been running down. For this there seemed abundant reason. I was informed by those who had been about her that, despite all warnings and entreaties, she had insisted upon confining herself closely to the house, sewing late at night, during the hot weather of June and early July. This she was, however, unwilling to admit. I found upon inquiry that menstruation had reappeared scantily, but had disappeared, notwithstanding the use of the hot baths. As she had no other symptoms pointing to uterine disease, and as the period for attempting to restore the menses seemed past, I directed my attention to her general condition, continuing the restorative treatment and remedies for the bowels, which acted imperfectly, apparently accounting for the persistent nausea and imperfect digestion. She appeared to improve, and by Sunday the 20th was much better,—indeed, thought herself almost well. I continued to visit her on alternate days until Friday, when I paid my last visit. She shortly afterwards left Philadelphia to spend some weeks with relatives residing on the Hudson River above New York City, where I saw her on the 29th of August, looking much better, and apparently in good spirits. Under the anxious care of her relatives, who sought by every conceivable device to build her up and amuse her, she gained flesh and strength, while at the same time she impressed those constantly about her that she was ill at ease or had something preying on her mind. This was at the time unknown to me, and I left her (the visit was purely a social one), believing that she was rapidly recovering. At this time, also, I questioned her with regard to menstruation, and learned that, although her last period was not strictly normal, yet it was more natural, and she evinced no concern about it. On the 18th of September she sent for me, having returned to Philadelphia on the 12th, and, for the first time during her illness, I found her in bed. She was greatly excited,—in a condition similar to that in which she was after the attack of influenza on April 1. She sought to be cheerful, however, and confessed that for some time she had been under the impression that “she had a tumor,” which she located in the right groin,—that it did not maintain a uniform size, but was sometimes as large as her fist. I at once examined her abdomen, and found absolutely no evidence of the presence of a tumor. There was no swelling in the groin, and the belly was normally tympanitic throughout. She had just finished menstruating, and said that the period was the most natural one she had had for years, though the flow was more than usually copious. She had had a daily chill for two or three days previous, but, as she had been spending the summer in a malarious district, this was amply accounted for. There was no febrile movement, and the pulse, though not full, did not seem particularly feeble for a frame so slight as that of my patient. I prescribed a sedative mixture, arranged for the administration of quinia in antiperiodic doses, and left her.

On the following day she was apparently better, though in bed, with a book at her side, which she had been reading. In the evening, however, she sent for me, when she appeared very nervous, restless, and complained of pain, which, starting in the right iliac region,

seemed to follow the course of the large intestine. I again examined the abdomen, found it slightly more tympanitic, but there was *no tenderness*, and the pain was ascribed to flatulence. A hypodermic injection of one-sixth of a grain of sulphate of morphia gave her prompt relief.

The following day I found her in the same restless and excited condition, and complaining of pain, which, however, she could not precisely locate. It seemed higher up, and more in the back than in the iliac region. Nausea was now added to her symptoms, and it was almost impossible for her to retain any food or medicine. In the afternoon she had several evacuations from her bowels in rapid succession, the last of which alone was loose. The use of bismuth, morphia, and pepsin in powder during the day diminished the nausea and allayed the pain; and, after giving a hypodermic injection, I left her about 10 P.M. in comparative comfort, though towards morning she again had some pain. She was free from it again when I visited her at 9 A.M. Sunday, very comfortable at noon, and at 9 P.M. declared to myself that she was almost well. She had taken continuously of nourishment at intervals throughout the day. I, however, gave her the hypodermic injection at this time to secure a good night's rest. She had a single loose movement of her bowels in the morning of this day. The pulse was not above 90, and her abdomen, to use her own expression, was as flat as her hand. The next morning I was sent for before breakfast. She had been suffering pain since 2 A.M., when, after taking a drink of cold milk and lime-water, the pain suddenly set in, as she described it, when the drink reached the great bowel and began to traverse it. Her belly was now somewhat tumid, and it seemed desirable that her bowels should be opened. Accordingly, I gave her hourly a grain of calomel, at first combined with opium to subdue the pain, but later alone. By midnight twelve grains had been administered without effect. Her restlessness was now extreme, while the difficulty of appreciating her exact condition can be conceived from the fact that, although complaining greatly of pain, she would appear to be relieved whenever I remained in the room, and a hypodermic injection of simple water gave her as prompt relief for the time being as one of solution of morphia. On Tuesday morning I left her for a time, but before returning was sent for, to find her in a state of great prostration. Her pulse the day before did not exceed 100; it was now 120, and feeble. She soon reacted, but the tympany was now considerable, and the indications for a movement of her bowels seemed urgent. Accordingly, an enema of soap and water, castor-oil, and turpentine, to the extent of a quart, was administered, but was retained. Between twelve and one of this day she again became suddenly and alarmingly feeble; the extremities were cold, and the pulse almost gone; and it was only after an hour's continued exertion in rubbing, the use of mustard cataplasms, and large quantities of pure brandy and whisky, that she again reacted. During the afternoon—after 4 P.M.—and the evening the enema was passed, containing, however, little fecal matter, and with no relief to the tympany.

After midnight she again fell into a condition of prostration, from which it seemed impossible for her to rally; and the administration of nourishment and remedies was discontinued, in the belief that she was dying. Notwithstanding this, she again rallied towards morning, and stimulants and nourishment were again plied. Thus she sank and rallied throughout the day, reacting less completely after each sinking-spell, until at 5 P.M. she was in a state of complete collapse, her extremities cold and clammy, pulse 150,—scarcely perceptible,—but her mind was perfectly clear, and she expressed herself as “better, much better.” She died, finally, at

5 A.M. of the 25th of September, answering all questions intelligently up to within an hour of her death.

A post-mortem examination was made about twelve hours after death. The intestines were much distended with gas, which escaped rapidly on puncture. Superficial examination of the abdominal contents after laying back the abdominal walls revealed nothing; but on drawing up the intestine from the right iliac region, where seventy-two hours previously we had located the lesion, whatever its nature, there was seen to well up from the pelvis a mixture of pus and blood in considerable quantity,—at least an ounce. The collection was surrounded by the usual products of a circumscribed peritonitis, to a considerable degree organized: indeed, the abscess, for such it really was, may be said to have been encysted. In seeking for the cause of this extraordinary condition, the pelvis was further explored, when, lying in the hollow of the sacrum, firmly adherent to the viscera just below the promontory, was found what was at first thought to be the body of the uterus, but which on further examination proved to be a succulent tumor, nearly spherical, and about three and a half inches in diameter. This was attached by a broad pedicle to the right half of the body and cornu of the uterus. This organ was wider than in health,—perhaps three and one-half inches from cornu to cornu,—but not any longer, and presented no peculiarities about the os. The cavity of the uterus contained two or three very small fragments of a coagulum, traces of the last menstruation. The tumor was encapsulated, and by microscopic examination found to be made up almost purely of fibre-cells, presenting mainly the characters of the unstriped muscular fibre-cell, though some were much elongated and presented the delicate attenuation of the spindle-cells in a sarcoma. There was also a small amount of fibrillar connective tissue. The characters of the tumor were, therefore, those of a *myoma*, while the body of the uterus was enlarged through a hypertrophy of the same element.

With these facts of the examination before us, the *rationale* of the result seems necessarily as follows. The growth having existed for an unknown length of time, causing, perhaps, the frequent pain in the back, of which the patient, as was afterwards learned, was in the habit of relieving herself with dry cups, finally began to suppurate at its posterior adherent portion,—the anterior and lateral parts were quite smooth and uninflamed,—and finally the abscess ruptured into the peritoneal cavity, giving rise to the symptoms of sudden prostration which appeared on Tuesday morning, and the peritonitis which began to show itself in the tympany on Monday. Indeed, the aspect of the abdomen was so like that of a case of general peritonitis that Prof. Da Costa—the privilege of whose counsel I enjoyed during the last two days of her life—remarked that “we would suppose she had peritonitis if its signs were not wholly wanting.” There was, indeed, at no time pain on moving the limbs, which were generally kept in the extended position; nor pain on coughing, nor decided tenderness.

The interesting questions in connection with the case are these: 1. Had this actual tumor anything to do with the imaginary one which the patient thought she had in the right groin? 2. Could the condition have been diagnosed before death?

I think the first question may be answered only in the negative. For, while the patient thought the tumor was in the groin, it lay in the pelvis in the

median line, and *adherent* to the textures in the vicinity of the promontory of the sacrum and below it, so that it could not possibly have fallen over into the region of the right groin, unless, indeed, the adhesion was formed during the last few days, and before my attention was called to the abdomen on account of the suspicions entertained by the patient. Moreover, she had lost a friend nearly four years previously, after operation for a large ovarian tumor, and since that time she had often semi-seriously suggested that she herself had a tumor of a similar nature, though the impression which so greatly affected her was of but two or three months' duration. This impression was so strong that she actually thought her condition was visible in her appearance, and dressed so as to conceal it. And yet, when I first examined her abdomen, one week before she died, it was literally as flat as her hand, and exhibited only normal percussion-sounds.

The second question as to diagnosis may, perhaps, be conscientiously answered as follows: By internal vaginal examination, combined with external abdominal palpation during etherization, the existence of a tumor at the top of the uterus might have been determined. But, apart from the fact that such manipulation, by tearing the delicate adhesions of the succulent mass, might have precipitated the final cause of death,—the entrance of pus into the abdominal cavity,—it is not likely that, with the very slight symptoms of uterine difficulty in an exceedingly modest, unmarried woman of her age, any physician would have thought of suggesting such an examination. That percussion should have given no evidence of its presence is not surprising when we recall the situation and small size of the tumor and the fact that it was first mistaken for the uterus itself.

PHILADELPHIA.

TWO CASES OF APHASIA WITH HEMIPLEGIA.

BY C. SEYMOUR, M.D.,

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THE phenomena attendant upon cases of aphasia, either with or without paralysis, are so interesting to the observant practitioner that I subjoin the following cases from my own experience.

Case I.—Miss Lydia U., æt. 50, twenty years ago had acute articular rheumatism, which undoubtedly implicated the heart, as she had extensive cardiac hypertrophy, and a distinct mitral regurgitant murmur.

On the morning of January 1, 1868, while in the act of dressing,—having a moment previously engaged in conversation with a companion,—she suddenly felt her right arm grow numb and become helpless. After rubbing it awhile, sensibility returned; it regained its strength, and she finished dressing, her room-mate having gone downstairs. When Miss U. entered the breakfast-room she attempted to say “good-morning,” and then for the first time found herself unable to speak. Wishing her sister summoned, she procured writing-materials, but found the only word she could write was “how,” knowing perfectly that it in no way conveyed her meaning. She remained in this state for several hours, but before evening could say one or two words, and the next day could

talk nearly as well as ever. Some weeks after this, on first attempting to write a letter she found herself unable to spell the simplest words, although she had had a liberal education, being a graduate of Mt. Holyoke Seminary. Eventually she regained this faculty, as well as speech. There evidently remained slight paralysis of the right arm, and it was at times the seat of wandering pains.

On November 11 of the same year, after a hearty dinner, she suddenly fell down in a fit of apoplexy, vomited profusely, and was deeply comatose for a time. On returning to consciousness it was found that she was completely hemiplegic on the right side, and had again lost her speech. Slowly but gradually the paralysis improved, more especially in the leg,—the arm always remaining much the weaker limb; but she never again regained her speech. The countenance had none of the apathetic expression characteristic of grave cerebral disease, but was bright and intelligent: her vocabulary, however, had vanished. She could say "yes," "no," and "came," and usually repeated them all in answer to questions. She would instantly apprehend the mistake she had made, and appear annoyed thereat, but would remain silent, as if to intimate her helplessness. The few words she had at command were as distinctly enunciated as ever, showing that there was no paralysis of the articulating apparatus. When asked to write her name she would get as far as Ly, and then always stop, being never able to finish it: this was all she could write; yet she could copy words without difficulty. She could not read, and, what was singular, the only words she seemed to recognize were those pertaining to the Deity. These she would pick out, and signify by gestures her intelligent apprehension of; but words of two or three letters she would point to and shake her head, signifying she did not understand them. She died October 3, 1870, evidently from the cardiac disease; dyspnœa and hæmoptysis being distressing symptoms during the last weeks of her life.

Post-mortem examination of the heart only was held. The organ was greatly hypertrophied, and the mitral curtains loaded with calcareous deposit to the thickness of half an inch by measurement. The orifice consisted of a narrow, irregular slit or button-hole, of course permanently open. This condition of the heart must have been present to a large extent years before the patient suffered her first apoplectic seizure, which might have been from embolism or from clot, but the profound loss of consciousness and permanent paralysis following the second attack probably show that it was the result of hemorrhage in considerable quantity.

Case II.—Wallace P., æt. 4 years. From birth this child had been noted for unusual cranial development, his head being now twenty-two inches in circumference, yet with no indications of its being hydrocephalic. He had been liable to convulsions since infancy, especially at the approach of any febrile disease. Attacks of simple acute bronchitis several times induced them. During the month of October, 1872, he was again attacked with bronchitis, when convulsions suddenly supervened, of a more startling form than ever before: in fact, he may be said to have suffered from a most violent attack of eclampsia for twenty-four hours. He would hardly be released from one fit ere he was seized with another. Every one about him learned to recognize the approach of a convulsion by the premonitory scream, after which tonic and clonic spasms would ensue, lasting for forty or sixty seconds, to be followed by stupor and exhaustion. When at last these convulsions were conquered by bromide of potassium, the child was so prostrated as to be almost comatose for a day and a night. When he did wake up, he was found to be paralyzed on the right side, and speechless. Every effort was made to induce him to speak, but

without avail. At the end of three weeks he succeeded in saying "mamma," in a slow, hesitating way, characteristic of a child first learning to talk. And in this way, learning one word after another, did he regain his lost, forgotten vocabulary.

The paralysis was more obstinate; yet after several weeks he began, by the aid of electricity, to perform slight muscular movements. Meantime his leg and arm were markedly atrophied. On first attempting to walk, his power of co-ordinating the locomotory movements was sadly in abeyance, his leg being thrown out "promiscuously." Yet in time this difficulty was overcome, and at the end of a twelve-month he appeared as sound and healthy as ever, having had no return of the fits.

The complete recovery of this case leaves the pathology of it in a state of speculation: yet it is rational to infer cerebral hemorrhage and clot, induced by the eclampsia. The aphasia without the paralysis might possibly be accounted for without supposing so grave a lesion, for he was manifestly aphasic from loss of memory. He never talked at random, and when once he had begun to learn his words over again they came readily enough to use. The writing-test was impracticable, of course, in so young a child.

The other patient not only had lost her power of speech, but the *intellectual faculty* that prompted written and spoken language was destroyed. If she could speak a word, she could not convey an idea with it. The child, as soon as it had the word at its command, used it correctly.

The woman's first attack would seem very much to have resembled the child's, though much slighter. Then she had simply forgotten her words. She could neither speak nor write. When this power was regained she could speak and write as well as ever. Hence the difference would apparently seem to be one of degree, for a second attack, more profound, left a far deeper impress upon the cerebral functions.

May not the child be predisposed to another attack of the same trouble, and liable to much more lasting damages therefrom?

SPONTANEOUS CURE OF A HERNIA.

BY JOSEPH R. BECK, M.D.

ON the 26th, of May, 1873, I was sent for to see Miss B. P., 15 years of age, for some trouble in or about her right groin. Upon making an examination, there was apparent a large, complete, right inguinal hernia. The history of the case was substantially as follows:

The patient, who is very large and muscular for her age, and prematurely developed, stated that some two weeks more or less before the time of my visit, in coming down a long flight of stairs leading from the school-building to the street, she somehow slipped, and fairly, though very forcibly, assumed a sitting position. The fall did not seem to be productive of any bad effect other than an undefined uneasiness, which was located in the right groin, and which disappeared after two or three days, and the circumstance passed entirely from her mind.

Two days prior to that on which I saw her,—namely,

on the 24th of May,—while lifting a tub filled with water from a bench to the floor, she states that she distinctly felt something give way in her right groin; and in the evening she noticed for the first time a tumor at the seat of pain. The pain, which had been acute from the time of the "giving way," had yet not been excessive, nor of such a nature as to have caused her any alarm; but this was the case when she saw the tumor, which, when she stood erect, was as large as a good-sized orange, but which became somewhat reduced in size when she assumed a recumbent position.

Upon being duly satisfied that the tumor was a true hernia, and upon attempting its reduction by taxis, I found it to be impossible to return the bowel, and, ordering a bladder filled with crushed ice to be steadily kept on the tumor until morning, made no further attempt at reduction at that time. Next morning the hernia was readily and easily reduced; but, before a proper truss could conveniently be obtained and applied, the bowel descended a second time, and remained down in spite of careful manipulation, resisting all my attempts at its return until the morning of the 29th. On this day, however, I succeeded in returning it to the cavity of the abdomen, applied and adjusted the truss, and left the case, supposing that everything was again in proper condition.

On the 9th of June following, I was again sent for, and then discovered, to my surprise, some small hard bodies, numbering in all, perhaps, four or five, situated immediately beneath the skin, and apparently upon the site of the external abdominal ring, and productive of so much pain that the girl was entirely prevented from using her truss. She was now, by my order, strictly confined to bed. These substances continued to enlarge gradually until the 1st of July, when they presented a coalesced condition in the shape of a tumor as large as an English walnut, very hard, irregularly nodulated, with the skin deeply congested over its entire surface, and entirely immovable.

Diagnosis.—Either a portion of the omentum or inguinal lymphatics in a congested state from the forcible dilatation of the hernial canal, or—which is perhaps most likely—irritated to inflammation by the pad of the truss. A careful examination failed to reveal the presence of intestine in the tumor, and the most rigid investigation failed to demonstrate the least permeability of the hernial canal.

In order to confirm my diagnosis, I asked my friend Dr. Gregg to see the case with me. His opinion was to the effect that the trouble was probably glandular, and coincided with my own as to its cause. Acting upon my confirmed view of the case, I ordered alternately the application of iodine and cantharidal collodion for five or six days, when, having set up an issue of pus, poultices were ordered, and continued without intermission until July 14, when the patient was discharged from treatment.

The tumor sloughed entirely away, and, the irritation having been of such a high grade, the product was adhesion of the sides of the canal: this channel was thus hermetically sealed, and the hernia permanently cured. After wearing the truss

a few weeks longer, as a precautionary measure solely, it was laid aside, and never resumed.

It is impossible for me to determine positively what the nature of the tissue was that underwent this inflammation, but it is perhaps fair to regard it as having been glandular and not omental, since the hernial canal was not itself swollen to any appreciable extent.

FORT WAYNE, INDIANA.

NOTES OF HOSPITAL PRACTICE.

PHILADELPHIA HOSPITAL.

CLINICAL SERVICE OF DR. H. C. WOOD.

ON THE USE OF CALOMEL IN FUNCTIONAL HEPATIC DISEASES.

PHYSICIANS are divided into two schools on this subject; one saying that calomel has no effect on the liver, the other saying that it has. Those of the latter opinion are certainly in the majority, and embrace in their number by far the greater bulk of the active practitioners. Those who deny the action of mercury on the liver found their opinion upon experiments on animals; but, though much of our advance in therapeutics has been derived from this source, it cannot overthrow well-observed clinical facts.

Bennett, Gamgee, and others of the so-called "Edinburgh Committee" performed the experiments by making biliary fistulæ and giving calomel and other drugs. They found that calomel in small doses had no effect; in doses large enough to cause depression and other symptoms the amount of bile was diminished. But these experiments are unfair, because under abnormal conditions; and this alone would invalidate them.

Röhrig, a celebrated German author, opened dogs along the linea alba, drew out and opened the gall-bladder, and observed the secretion, which was kept up for several hours. To dogs about to be opened he gave calomel, with the result of greatly increasing the flow of bile. But I think that all these experiments should be cast aside. The only evidence to be relied upon is clinical.

Any of you may take ten to twenty grains of calomel, and your stools will become green. Some say that this green color is due to the formation of a sulphuret of mercury. I am not aware, however, that this has ever been proven for a single stool; and the question is not, Does *any* green calomel-stool contain mercury? but, Do *all* such stools? The evidence is most positive that many of the green stools of mercurial purgation contain no mercury in any form. Thus, Simon analyzed such fæces, and found biliverdin and the other normal constituents of the bile, but no mercury; and Golding Bird and Michea did the same, with much the same result. Now, to find mercury is a very simple chemical problem, and it is impossible that the metal should have been overlooked by such eminent chemists as those mentioned, especially by Simon, a prince among organic chemists.

By some it has been thought that mercury simply causes bilious stools by increasing peristaltic action and sweeping out of the small intestines the bile naturally there present. I cannot believe this: it is notorious that resinous purgatives—drastics, far more active than calomel—do not produce "bilious stools." This clinical observation of every day has been confirmed by the chemical researches of Michea, and is enough of itself to indicate that calomel increases the secretion of bile. But still more cogent reasons are

manifold for believing in the hepatic action of the drug. It is not rare to find persons whose livers are especially sensitive to the action of mercury; and in these I have known a moderate dose of the drug to cause not merely violent bilious diarrhœa, but also the vomiting of large quantities of nearly pure bile.

Moreover, the history of disease and of its treatment seems to me to prove indisputably the truth of the view I am advocating.

It is a well-known fact that in jaundice from obstruction the stools are almost white; and it has been over and over again experimentally proven that if in animals the bile be shut off from the intestines the stools lose their color.

You will often hereafter meet with cases in which slate-colored stools are passed, either with diarrhœa or constipation. This want of color is no doubt due to a want of bile in the alimentary canal, to a torpidity or absence of functional activity in the liver. If you give calomel to such a patient, you will find that the passages become black, or even green; and this may occur without any increase in the diarrhœa.

Many cases of serous diarrhœa, which have been treated indefinitely with astringents, etc., will be promptly cured by the exhibition of calomel.

To illustrate these points, I bring before you to-day these two men. I wish you distinctly to understand that the example I am about to give, although a striking one, is by no means a rare one; but the results mirror those which have been witnessed hundreds of times and which I myself have seen over and over again. The first patient entered the hospital four weeks ago; he then had ten to twelve liquid, colorless, slaty, painful stools daily; there was no vomiting. He was given at intervals opium, bismuth, acetate of lead, tannic acid, and nitrate of silver, and his diet was regulated *secundum artem*. Under this treatment he improved very slowly, and continued to have liquid stools and to be utterly devoid of appetite for nearly three weeks, when the color of his passages gradually changed, and he is now just fairly convalescent.

This second man was admitted at the same time, from the same locality, and with exactly similar symptoms. For ten days he had similar treatment, without decided improvement. The astringents were then stopped, and he was put on blue mass, gr. ix daily, in three doses: in two days the stools were firmer, much less frequent, and, what is more important, their color was changed; on the third day the man was well.

The symptoms in the two cases were exactly similar; the disease had originated under precisely similar circumstances and causes; both patients being paupers in the out-wards, doing the same work, or rather enjoying the same idleness, eating at the same table, and having similar constitutions and similar past histories; yet one required three weeks of treatment without a mercurial, and the other, after pursuing a similar course as its fellow for ten days under the same treatment, is arrested in twenty-four hours by calomel *without* astringents.

These cases, gentlemen, are very strong in their contrast, but, I repeat, are not solitary ones, but examples of what I have seen over and over again. Diarrhœas apparently trivial resist treatment until you give calomel. Sometimes the mercurial suffices; often, however, after the biliary secretion has been started, it is necessary to use for a day or two bismuth and acetate of lead, or other astringents. The practical bearing of these remarks is that you should always inspect the stools, and, if they indicate the absence of bile, calomel should be given unless especially contra-indicated.

You will find sometimes that slate-colored stools and digestive disturbances coexist with constipation; and under these circumstances a mild mercurial course

is often of great benefit. Again, sometimes green stools in adults replace the slate-colored passages of the diarrhœa of which we have been speaking: in such cases there is often excessive pain, especially if the diarrhœa has been stopped. Under these circumstances I have never found anything but a mercurial to act efficiently.

TRANSLATIONS.

THE CAROLINA TWINS IN PARIS.

AT a recent *séance* of the Académie de Médecine (*Bulletin de l'Académie*, February 13, 1874), M. Tardieu reported the result of an examination made by himself and M. Ch. Robin of this interesting case. His conclusions were that the double being is in reality formed of two distinct individuals, placed back to back and united by the bony framework of the sacral region. The spine, he remarked, shows in each individual a very pronounced double curvature, the result of efforts made by the two sisters at an early period of their existence to turn themselves face to face.

The superior parts of the bodies live an entirely distinct life; the heart occupies in each its normal position, and does not beat in unison with that of the other.

Tactile sensibility is entirely separate in all the superior part of the body; each individual separately receives and perceives different impressions. The most striking point about the lower part of the body is the community of sensation and tactile sensibility: the pulse carefully counted in the popliteal space presented a perfect synchronism. As to sensibility, it sufficed to touch any part of either of the four inferior members in order that both sisters should be simultaneously conscious of it. MM. Tardieu and Robin were assured that menstruation is always single and simultaneous, and that the need of excretion is felt and is always satisfied at the same time, in each of these creatures.

M. Tardieu having completed his communication, M. Broca remarked that he had also examined the twins, and, while not intending any criticism on M. Tardieu's remarks, he desired to call the attention of the Academy to certain peculiarities which seemed worthy of consideration. M. Tardieu had rightly said that the sensibility, which is completely distinct in the trunk and upper limbs, is common to both inferior members. He (M. Broca) thought, however, that it should be added that this nervous continuity is very limited. When the leg of one of the twins is touched, the other perceives a sensation, it is true, but cannot distinguish its character, nor the locality at which contact has been made, nor the extent of surface touched.

This very vague sensation never rises to pain, and contrasts strongly with the very decided sensation which is perceived by each brain when the corresponding legs have been touched.

In addition, the muscles of either sister obey only the corresponding brain: the will of one is incapable of exercising any influence upon the movements of the other.

The exact co-ordination of the movements of walking has undoubtedly been attained by habit only. It must then be admitted that the fusion of the spinal cords is limited exclusively to the posterior columns, and that even there it is quite incomplete.

Considering them as a single monster, as they stand twisted partly side to side, they may be said to have but one anterior and one posterior aspect, and consequently two weaker and shorter anterior limbs, and two stronger posterior. Walking is possible without the use

of the anterior feet, only the posterior touching the ground; a sort of ambling gait is the result. A similar atrophy of what may be called the two anterior members has been noticed in other double monsters.

They have in reality but one anus, and the rectum is simple, at least in its inferior part; the Y-shaped bifurcation which makes communication with the two digestive tubes is effected beyond the limits which can be reached. The single anus is situated between the members which have been called anterior.

The vulva is placed horizontally between the origins of the four limbs, on the inferior face of the united pelvis.

This vulva, although single in appearance, is in reality double. It has the form of an ellipse, terminating in a point at each extremity, and having at each extremity a clitoris with its prepuce. There are four labia minora, but only two labia majora, making the entire circuit of the vulva and corresponding to a single vestibule.

A median vertical antero-posterior septum separates, M. Broca was told, the genital apparatus of one from that of the other.

There are two vaginæ bordering on a single vestibule; to each vaginal opening a distinct membranous hymen was found. Finally, there are two urethras, situated one at each extremity of the vulva, between the corresponding hymen and clitoris.

This disposition conforms to that which has been previously noted in the case of similar monsters.

The existence of a double vagina proves that there should be two uteri. The genital apparatus is doubtless constituted like the intestinal,—that is to say, it is really double, and only joined towards the external orifice.

The fact of a community of function in the genital, urinary, and intestinal apparatus cannot be brought forward to prove a more complete fusion of these.

The community of circulation explains sufficiently the fact that the menstrual epochs of the sisters coincide perfectly.

It can easily be understood why defecation is simultaneous. The two sisters always eat together, and equally; it is quite natural that their two parallel digestions should terminate at the same time. Every one knows, moreover, that will and habit are capable of regulating to a certain degree the time of defecation. The will governs the functions of the bladder still more easily, since micturition may be retarded by its means for hours. It is unnecessary, then, to explain the simultaneous micturition of the twins by the theory of a common bladder.

M. Tardieu had remarked that the movements of the two hearts are perfectly independent, and that the radial pulses of the two sisters are not synchronous. It should be added that they are not-isochronous.

One of the hearts—that of Milly—beats always a little more rapidly than the other. The difference is about two pulsations per minute. Several observations showed the same difference.

He had not, said M. Broca in conclusion, been able to examine the pulsations of the pedal vessels; but many observers had noted that, contrary to the fact noted in the radial pulse, they are synchronous. This would incline one to the belief that the two arteries communicate largely between themselves in the pelvic region. A simple transverse anastomosis would not suffice at all to produce this result, and it is very probable that an anastomosis by convergence exists, below which the aorta bifurcates again.

M. Tardieu remarked that he placed but little confidence in the statements of a double vagina, etc., made by the attendant of the twins, and regretted that he had not been permitted to make any examination.

M. Broca, in answer to a question as to the existence of a single or double uterus, replied that he thought there were two.* A. VAN HARLINGEN, M.D.

REMARKABLE RECOVERY FROM ABDOMINAL SECTION

(*Boston Medical and Surgical Journal*, February 19, 1874).—Dr. David W. Cheever reports the case of a young woman who suffered from a large sarcomatous tumor, involving the peritoneum and the abdominal parietes. An operation for its removal having been decided upon, a vertical incision, about six inches long, was made two inches to the right of the umbilicus, together with a transverse incision four inches in length. The peritoneum was found adherent to the under surface of the tumor. In continuing the operation the rectus muscle on the right side was quite destroyed; on the left it was not much disturbed. A strip of peritoneum, fully four inches wide at its widest part, and perhaps six inches long, tapering down at its extremities, was removed with the tumor. The abdominal cavity was now largely uncovered. The colon and stomach, as well as the small intestines, were visible. As quickly as possible, two large, warm sponges were put in the site of the tumor, and the hernial protrusions repressed. Warmth was applied to the chest, and a brandy enema given. The patient vomited, but soon rallied. A considerable time was consumed in securing vessels all around the incision, of which a great number had to be tied, including the epigastric artery. The cavity of the abdomen was sponged free of clots, and long, deep, silk sutures were passed. It was impossible to bring the peritoneal edges within two inches of each other in the centre of the wound. The ligature-ends were all brought outside, and a separate set of sutures closed, without tension, the three flaps of skin, which had been dissected off the deeper parts of the tumor, where it was not incorporated with the skin. Broad adhesive strips were firmly applied; then cotton wadding and a binder. The patient was immediately lifted into a warmed bed, between blankets, and one-fourth of a grain of morphia was given subcutaneously. Her pulse was excellent. There was some tympany for two days, and from the third to the seventh day a thin, dark, offensive discharge came in quantities from the wound. Brom. chloralum was used as a disinfectant. The urine was drawn for ten days, and the bowels moved after two weeks. Menstruation came on in seven weeks, and six months after the operation she was well, riding about and doing ordinary house-work. The unfavorable elements in the case were—the shock of a large uncovering of the abdominal cavity; the loss of a broad strip of peritoneum; the closing in of the peritoneal cavity with the raw surface of the dissected skin; the presence of a multitude of ligatures; the chance of hemorrhage; and the necessity of suppuration.

CASE OF PURULENT INFECTION AFTER EXTRACTION OF A TOOTH (*The Dental Cosmos*, February, 1874).—A man of strong constitution had recourse to a horse-farrier for the extraction of one of the last left molars. The gums were violently contused, and a fragment of the alveo-dental periosteum torn away. A few days after, the following symptoms occurred: headache, insomnia, fever, horrible fetor of breath, inflammation of the left cheek and gums, with formation of an abscess. Notwithstanding energetic treatment, the patient died two or three days later.

* A very full account of these twins, accompanied by a photograph and wood-cuts, appeared in the *Photographic Review*, vol. i. p. 43, 1870-71. The author of that paper, Dr. William Pancoast, was enabled to make a careful examination of the genitalia, and his observations show, in contradiction to the theory put forward by M. Broca, the existence of but a single uterus. In other respects the observations of the French physicians agree in the main with those of Dr. Pancoast.

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EDITORIAL.

LEGISLATION FOR THE INSANE.

CAN any one tell us by what fatality it is that amateur philanthropists and the chosen legislators of the State, when undertaking to promote the interests of the insane, frequently seem to have as completely lost their wits as the poor creatures who have awakened their sympathies? Certainly, the total ignorance of insanity and the ways of the insane, the palpable absurdity, the gross violations of common sense, that mark many of their performances in this direction, would be scarcely conceivable without the testimony of actual experience. During the last half-dozen years, many of our States seem to have been endeavoring to outdo one another in absurd and mischievous legislation for the insane. That demagogues should find it a sure card to clamor about tyranny, and wrong, and people's rights, and that amiable men sincerely anxious to do good should be instant, in season and out of season, with their pet schemes for accomplishing some unwise, if not impracticable, project, is what might be expected in the ordinary course of things; but it is surprising to see how readily, in a matter of so much importance, involving the peace of families and the safety of individuals, legislators stultify themselves by enactments pre-eminently foolish.

A few years hence, it will become one of the curiosities of human credulity that, in the seventh decade of the nineteenth century, a poor crazy woman, relying only on her nimble tongue, visited the legislatures of several of the States, and per-

suaded them to pass an act, framed by herself, for the government and surveillance of their hospitals for the insane; an act ignoring every principle of moral management supposed to be established by the experience of men enlightened by the science and imbued with the humanity of the age, and fitted only to introduce into those abodes of peace, quiet, seclusion, patience, and trust, a state of perpetual restlessness, anxiety, irritation, and distrust. Although these institutions are controlled by Boards of Trustees or Managers, comprising men whose character entitles them to unlimited confidence, yet her project provided another board, entirely independent and uncontrolled, and armed with plenary power to visit the hospitals whenever they pleased; to enter every hall and room, unaccompanied by any officer of the house; to hear every patient who had any complaints to make; to call before them the attendants, and sit in judgment on their conduct as represented by the patients, and to discharge both patients and attendants, without let or hindrance from any other authority. To inspire the patients with distrust of the officers, and withdraw them, as much as possible, from their control, a letter-box is to be placed in every hall, into which the patients are directed to drop their letters, sealed; and the officers are bound under heavy penalties to stamp and forward them, unopened, to whomsoever they may be directed. Letters to patients are also to be delivered unopened.

An act embodying these provisions was passed by the legislature of Iowa a year or two since, and by that of Maine, if we are not misinformed, the present winter. We are glad to say that in some other States where this woman has labored she has not been so successful, although, with that sort of glamour which bewilders so many persons of deranged intellects, she imagines, and so represents, that she has never failed. What the result has been in Iowa we learn from the reports of Dr. Ranney, the late superintendent, and of Dr. Bassett, his successor, premising that the former, after a service eight years long, highly creditable to himself and incalculably valuable to the hospital, resigned in disgust. He says that the authority of the officers was superseded by another, guided by no knowledge of insanity and working under the profound conviction that every officer and employé of the hospital was abusing his trust; that the latter soon came to be regarded by the patients as their natural enemies and oppressors; that all the salutary influences springing from their proper relations to each other were destroyed; that the habit of writing letters, and expecting replies that did not

always come, produced in the patients a state of chronic irritation not very favorable to recovery; that friends were alarmed by their stories of abuse; that the time and temper of the officers were taxed beyond endurance in replying to the anxious inquiries and complaints thus produced; that the best attendants refused to remain where they were perpetually charged with wrong-doing and condemned without a fair trial; and that many a patient was prematurely removed, to drift, very likely, into chronic insanity. Dr. Bassett testifies to the same results, and speaks particularly of the evils arising from the unrestricted correspondence. To any person possessing the faintest sense of propriety or the smallest modicum of common sense they are shocking enough, but to the average legislator, no doubt, they are the welcome outcome of a blessed reform. During the eighteen months that the law had been in operation, 5876 letters were sent to the post-office, and about as many were received by the patients. The character of the latter would scarcely be imagined by any one not practically conversant with hospitals for the insane, and therefore we quote Dr. Bassett's statement at length:

"Kind-hearted but injudicious friends have not unfrequently imparted news to patients, of an unfortunate character, at an untimely period, with such results as to have undone in a moment all that by patient labor and watching, extending over a period of weeks or months, had, by slow degrees, been accomplished. In a good many instances money has been sent to patients who did not need it, and who could not use it, which has been an inducement to elopement, and has resulted in efforts to get away from the hospital which would not otherwise have been made. I hold in my possession a package of opium sufficient in quantity to destroy life, if taken at a single dose, recently sent in a letter to a patient who, a week before his admission, had attempted suicide by cutting his throat. He had written to his friends that he was restless at night, and could not sleep, and wanted 'something to quiet his nerves.'"

The legislature of our Commonwealth has committed no folly exactly like this. It has placed no letter-boxes in the halls of the hospitals, and no case of suicide from opium can be fairly charged to its account. But it has made it a penal offence for the officers to withhold any letters of patients addressed to their counsel,—meaning thereby any one they happen to hear of as a lawyer,—or to debar the latter from seeing and conversing with the patients, if they wish it. The act is of little importance, because, with the kind of freedom now enjoyed

by the inmates of our hospitals, letters may be written and smuggled out every day in the week; and lawyers enough will be found ready to "take hold," provided they can see any money in it. The patient may have nothing, but his friends may do the handsome thing rather than be dragged into court to reveal the troubles and trials of the family. Revolutions, it is said, never go backwards: so in the fulness of time we may have here letter-boxes in the halls, whereby men of proverbial wisdom and prudence will proclaim their follies to a jeering world, and women, delicate, refined, and modest,—wives, mothers, sisters, daughters,—moved, as they often are in insanity, by the coarser feelings of their nature, will reveal their inmost thoughts in a manner the consciousness of which, on recovery, will overwhelm them with mortification and dismay. This is shocking, no doubt, to every person of any propersensibility; but let the public advance a little further in its contempt for all special knowledge, and be more ready on any matter of insanity to follow the lead of crazy women and amateur reformers, rather than the counsels of those who have made it the study of their lives, and we shall be following the example of Iowa and Maine. Follies of the kind we have been describing we shall always have, so long as people talk of what they know little or nothing about, and, under pretence of righting some great wrong or reforming some flagrant abuse, obtain ready credence from those who know as little about it as themselves.

THE COMPLIMENTS OF THE SEASON.

WE have been somewhat surprised at a furious attack in the *Medical and Surgical Reporter* of February 28, upon the *Philadelphia Medical Times*, particularly upon its Siamese Twins number,—an attack provoked, apparently, by our offering our readers a phonographic account of the report of the Commission to the College of Physicians. The lethargy of our ancient and venerable cotemporary would not, it seems, permit of the enterprise required to publish a full report of a meeting within twenty-four hours of its occurrence; but, this being the case, the *Reporter* would certainly have better consulted the dignity of its age and feebleness by maintaining silence, especially since in the same number it publishes an editorial in which the facts are taken without acknowledgment from our columns, as is shown by the circumstance that out of the two mistakes which occurred in our hasty report of Dr. Pancoast's and Dr. Allen's remarks, one has been copied, its utter ridiculousness not having been perceived by the

astute compiler. When a friend—or, if it suits the *Reporter* better, a rival—has achieved a success, it is much better policy to keep quiet than to raise a cry whose universal echo must be “sour grapes.”

Ill humor or impotent rage may afford amusement to lookers-on, may lead to the firing of a columbiad at a sparrow, or to the discharge at the innocent editorial caput of the *Philadelphia Medical Times* of a sentence containing eight words averaging thirteen letters apiece, but it is usually as destructive of logic as of good English; and the present instance is seemingly no exception to the rule.

Our critic tears passion to tatters because we do not hold ourselves bound by the Code of Ethics which the American Medical Association imposes upon its members. Not to be able to recognize the difference between a medical journal and a “medical practitioner” bespeaks a rare and choice obfuscation of intellect, which is delightful in an age surfeited with “cuteness.” A doctor does not advertise legitimately; a medical journal advertises legitimately in every way. The difference is so plain that it is a hopeless task to explain it to any one who does not see it at once. We give it up: our friend the editor of the *Reporter* must excuse us. Because we object to doctors advertising, and do advertise the *Philadelphia Medical Times*, with charming simplicity does our friend hurl at us that grand old maxim of our grandmother’s sampler, “Consistency, thou art a jewel!” We might retort that the jewel would shine fairer in the coronet of our virtuous critic if recently the whole country had not been deluged with circulars of the *Reporter*; but we desist: with pleasure we let the little animal—the *ridiculus mus*—creep into the oblivion of to-morrow. One request we would make of our assailant: hereafter, in attacking us, please do not sacrifice truth to indignation, and please do not misstate facts.

DROPS AND DROPPERS.

HAVING had occasion recently to keep a patient narcotized, and using the *deodorized* tincture of opium, we were astonished to find that the liquid disappeared from the bottle much faster than was to be expected from the number of drops exhibited. The phial used was the ordinary ounce-bottle of the apothecary. On dropping into a minim-glass, we found that it did not take, as usually estimated, one hundred and twenty drops to make up the drachm, but that *fifty-two* sufficed to do so. Deodorized—or, as it is sometimes called, denarcotized—laudanum

differs from true laudanum in being largely a watery preparation; and although its strength is practically the same, measure for measure, as that of the older preparation, its power, drop for drop, is evidently twice that of the ordinary laudanum. Yet we think most of the profession are in the habit, as we certainly have been, of giving twenty-five drops as the usual dose.

While on the subject, we take the opportunity of anathematizing those popular and plausible instruments,—the so-called “droppers.” As is well known, they consist of a pointed glass cylinder and a minute india-rubber bulb. Owing to the fineness of the point to which the liquid adheres, the drop is excessively small. Thus, using the deodorized preparation just spoken of, we found that one dropper gave one hundred and ninety-six drops, another one hundred and eighty-five drops, to the fluidrachm: in other words, the drop from the new apparatus was only one-fourth of an old-fashioned, honest drop. Evidently, if we are not to drop drop-doses, we must drop dropping from droppers.

PROCEEDINGS OF SOCIETIES.

PATHOLOGICAL SOCIETY OF PHILADELPHIA.

THURSDAY EVENING, JANUARY 22, 1874.

THE PRESIDENT, DR. WM. PEPPER, in the chair.

DR. GEORGE A. REX presented a specimen of *congenital malformation of the heart, contraction of the pulmonary artery, deficient septum ventriculorum, with origin of the aorta from both ventricles, no cyanosis*, from Matthew B., æt. 6 years. There was no history of any acute attacks of cardiac disease, but from an early age there had been signs of an embarrassed circulation, without any cyanosis.

Physical examination showed markedly extended impulse of the heart, with the apex-beat at the fourth rib just below the nipple; it was accompanied by a strong thrill.

On auscultation at the base, a strong systolic murmur was heard, which was transmitted to the apex, and was also heard over the pulmonary artery and along the aorta into the large arteries.

Three weeks before death, several hemorrhages from the lungs took place. General œdema set in, with effusion into the pleura, causing embarrassed respiration which lasted until death.

On post-mortem examination there was found considerable effusion into the pleural cavities, with little or none in the pericardial sac.

There was extreme hypertrophy of the walls of the right ventricle; while the left ventricle was small, with comparatively thin walls.

The aorta was healthy, and its valves were well formed and healthy; but it was situated immediately over the septum of the ventricles, which was imperfect, so that the aorta communicated directly with both ventricles. The cavity of the left ventricle was in great measure occupied by a firm clot, so that it evidently

had taken but a small part in carrying on the circulation.

The orifice of the pulmonary artery was contracted, and its valves contracted and adherent, so that but a small slit-like orifice remained, through which the blood could pass only with difficulty. The ductus arteriosus was closed. The valve of the foramen ovale was large enough, but was unattached at a small point, leaving a communication between the auricles as large as a goose-quill.

The PRESIDENT said he had had the opportunity of examining the case during life. The little boy was suffering very severely from disturbance of the heart's action; the pulse was very frequent,—140,—and there was a much more marked murmur than usually attends these cases of malformation. As a rule, the murmur was not intense, and was heard most distinctly over the locality of the perforation between the septum of the ventricles. In this case it was clearly a pulmonary artery murmur, and was transmitted from the base of the heart upwards to the left of the sternum, and the point of greatest intensity was along the left border of the sternum. It was also transmitted somewhat towards the right, and occupied the whole body of the heart: indeed, so intense was it that it could be heard over the whole chest and abdomen. This is to a certain extent explained by the patulousness of the pulmonary artery, which, while obstructed, still allowed the blood to pass.

Dr. O. H. ALLIS said he had a similar specimen, removed from a person 20 years of age; but, in consequence of the regurgitation, the right auricle had become so much dilated as to be capable of holding eight ounces of blood. He believed that in Dr. Rex's case there was no dilatation of the auricle.

The PRESIDENT presented a specimen of *rupture of the gall-bladder*, from Mr. A., æt. 70 years; of a healthy, long-lived family; had always enjoyed good health until the summer of 1873. For many years he had been of sedentary habits, and, although temperate in the use of stimuli, ate abundantly. About July last he began to be troubled with attacks of severe pain in the epigastrium, attended with vomiting, weakness, discoloration of urine, and distinct, though not extreme, yellowness of skin. These attacks were of short duration, but recurred every week or so. His general health did not seem affected severely, and the nature of his case was not suspected. In December he was seized with intense pain, referred to the right side of the back below the ribs, and to a point in front about midway between the gall-bladder and the umbilicus. The pain was very intense, and was moderated only by large doses of morphia. There was vomiting, with anæmia, constipation, and deep brownish-red discoloration of urine, which was found to be free from blood, but to contain bile-pigment. It was not tested for biliary acids. After twenty-four hours there was some remission in the severity of the suffering, when a second violent exacerbation occurred. The same partial relief occurred again in twenty-four hours, followed by a third intense paroxysm, during which he became slightly delirious and struggled to leave his bed. During his violent struggles against the strong restraint which was used to keep him in bed, he suddenly complained of still more intense pain in the right hypochondrium. He then soon sank into a state of collapse, with cold extremities, distended belly, which was tender on pressure, and wandering delirium. Death occurred fifteen hours afterwards, or about seventy-two hours from the beginning of the attack.

At the *autopsy* the abdomen alone was examined. There was general peritonitis, with fine injection of the membrane and adhesions of the coils of the intestines. On separating these, delicate ridges of soft lymph marked the lines of adhesion. There was a large amount of thick, grumous bile in the right hypochon-

driac region, lying free among the coils of the intestines close to the concavity of the liver. This organ was of full size, and in an early stage of cirrhosis. No lesions of the stomach, spleen, or kidneys were observed. The common bile-duct was greatly dilated, measuring about three-eighths of an inch in diameter. At a point one inch from the intestine a large conical biliary calculus was found impacted. About this point the duct was distended with bile, and on following up its ramifications throughout the liver they were found distended with grumous bile, containing numerous coarse, gritty particles of biliary gravel. The gall-bladder was collapsed, and contained only a round, black calculus, three-eighths of an inch in diameter. The walls were thickened and fibrous; the mucous lining was normal, save in one point, just at the beginning of the cystic duct, where there was a perforation which would admit an ordinary probe. The cystic duct was narrow and tortuous, but still patulous for fluids.

Dr. J. H. HUTCHINSON presented, for Dr. BODINE, of Trenton, a specimen of *aneurism of the aorta*, removed from a man aged 29 years, who was six feet high and weighed two hundred pounds. He died suddenly while at work in the shoe-shop of the New Jersey State Prison, where he had been for six years. He had had constitutional syphilis in a mild form. There were no symptoms of aneurism during life, and the disease was, therefore, unsuspected. He had been engaged during a part of his imprisonment in working one of the shoe-pegging machines, an occupation which is sufficiently laborious to have had something to do with causing the aneurism.

The PRESIDENT recalled a specimen of heart-disease presented by him several weeks ago, when, in addition to extensive disease of the aortic valves, there was a small aortic aneurism very similar to this, and which was not suspected before death, the physical signs being attributed solely to valvular disease.

Dr. C. B. NANCREDE referred to a large aneurism which he had presented last spring from a patient who dropped suddenly dead, who had previously suffered from secondary syphilis, and in whom aneurism was not suspected.

Dr. MORRIS LONGSTRETH presented a specimen of *cancer of the liver*, removed from E. W., æt. 35, a widow, domestic, admitted to the Pennsylvania Hospital November 18, 1873, and who died November 23, 1873.

She had been in poor health for five years, but was without distinctive symptoms of disease until last summer, when she had an attack of vomiting, with loss of appetite. Subsequently she had considerable pain in the abdomen; but this was not a prominent symptom.

On admission, the patient was extremely weak, and it was difficult to make an examination or to obtain any history. The abdomen was much enlarged, and in the right iliac fossa and umbilical region a large mass was felt. She suffered from vomiting; urine was albuminous, very scanty, and contained granular casts with fatty epithelial cells attached.

On the fifth day after admission she was in a moribund condition, and a pretty thorough examination was made. There was dullness from the fourth rib to a point ten inches below, nearly to the ilium. The lower border of the liver could be distinctly made out.

Autopsy, one hour and a half after death.—Body emaciated; no anasarca of cellular tissue.

Thorax,—a few adhesions of pleural sacs on both sides. Lung-tissue everywhere crepitant; near the apex of the right lung was a small calcareous nodule, surrounded by a congested area.

Heart and vessels were normal, except a slight thickening of the mitral valve and a few atheromatous patches in the aorta. *Lungs and bronchial glands* were blackened by a pigmentary deposit.

Abdomen contained a large amount of blood-stained serum.

Stomach was rather small, and adherent to the surrounding parts. On the lesser curvature were three or four much enlarged and infiltrated glands of soft consistency. These contained no fluid.

Projecting into the cavity of the organ and connected with the enlarged glands was a large granulating mass, fungus-like, with everted edges and a depressed centre. Its surface was uneven, but ulcerated at only one or two points slightly.

Liver was enormously enlarged in all directions, and weighed ten pounds three ounces avoirdupois; the peritoneal coat, though thickened in places, was generally smooth; the right lobe was constricted or depressed at the part corresponding to the costal border. There were no very prominent nodules on the upper surface of either lobe, but the under surface of the left lobe was considerably nodulated. The lower border of the organ was firm, and generally even. There was no umbilication of any of the nodules. The calibre of the vena cava was somewhat encroached upon, and turned from its normal direction by the enlargement of the organ upwards and backwards. Transverse section of the left lobe revealed irregular cancerous infiltration of the hepatic tissue; the deposit was soft, and yielded little or no juice.

Gall-bladder was moderately distended with greenish bile; cystic, hepatic, and common ducts pervious.

Spleen was of normal size; a few patches of recent lymph on its surface.

Kidneys were of normal size; weight of both, ten ounces. Capsule transparent, and readily removable.

Uterus very small; as the size of a pin's head; probe entered about one inch; no cancerous nodules in any other parts.

Dr. J. H. HUTCHINSON said the patient had been under his care for five days. When admitted, she was in a very feeble and wretched condition, and it was very difficult to obtain a history. The existence of liquid was easily detected, but so much distention and tenseness of the abdominal walls was produced by the presence of a large amount of gas in the intestinal canal that a thorough examination of the abdomen was impossible. When he first saw the patient he felt very distinctly a mass in the right iliac region, but he also detected a clear sound beneath the costal border, and was unable then to trace the liver into the mass. He was therefore disposed to consider the latter an enlargement of the kidney or ovary. A few days later, when the distention was less, he was able to trace the liver from the costal border down to this mass, with which it was evidently continuous. Having recognized the enlargement of the liver, it was by no means easy to conclude that this was due to cancer. The surface of the organ was smooth, and there was very little jaundice. She had no symptoms pointing to cancer of the stomach, which existed.

Dr. H.'s impression was that the clearness referred to below the costal border was due to a distended colon. Frerichs has called attention to the fact that a coil of the small or large intestine occasionally gets between the liver and the abdominal walls and gives rise to this tympany; but he did not think that was the case here.

Dr. LONGSTRETH presented the *enlarged spleen and cirrhotic liver* from G. H., æt. 50; single; hatter; admitted to the Pennsylvania Hospital September 23, 1873, and died December 4, 1873. The patient denied that he was syphilitic or intemperate. He had had two severe attacks of malarial fever in Arkansas three years ago; otherwise he had been in good health until June last. At that time he had a very copious hemorrhage; he had subsequently been very weak, but there was no return of bleeding. Anasarca and ascites appeared shortly afterwards. No urinary symptoms were noticed.

On admission, spleen was found to measure four inches in transverse diameter; abdomen distended; heart and liver displaced upwards. On October 6, vomited blood,—about eight ounces; and this recurred several times.

November 4.—Abdomen increasing in size; some decrease in hepatic dulness found. Splenic dulness began as high as the fifth rib. Microscopically it was thought the blood showed an increase of white blood corpuscles. Stomach had become very irritable.

November 27.—Two gallons of fluid were drawn from the abdomen.

Died December 4, from exhaustion.

Autopsy, made two hours after death.

Thorax.—No morbid appearances to note.

Heart.—Organ was small, and its left ventricle was somewhat hypertrophied.

Abdomen contained a large amount of fluid, it having nearly refilled to its original size after the tapping.

Liver was contracted, hob-nailed, and fissured in places, and weighed three and a half pounds. The fibrous tissue was increased; abundant oil-globules were seen; cells reduced in size, very granular and fatty,—indeed, no cells could be found normal in appearance. On upper surface was a small but deep-puckered depression, from which nearly all traces of cell-structure had disappeared, nothing but the fibrous elements being present, with the interspaces filled with blood, which escaped on section. Connective tissue in the fissure was increased and opaque.

Gall-bladder contained greenish bile; its duct was narrowed, but patulous.

Spleen was enormously enlarged, weighing three pounds avoirdupois. The organ rested nearly horizontally under the diaphragm. It had several deep fissures running across its outer surface, and from its upper extremity was a large, projecting mass. Capsule thickened, and trabeculae very prominent. Its tissue appeared mottled, and under the microscope its granular and corpuscular as well as fibrous and elastic tissue were found enormously increased.

Kidneys were considerably increased in size, and very firm; capsules were quite adherent, and on removal left a granular surface. The organs were very much congested, but their outline was regular. A small cyst was found on the outer edge of the left kidney. Under the microscope the epithelial cells of the tubes were found quite granular, but not fatty, and no casts were discovered.

Dr. LONGSTRETH also presented a specimen of *obstruction of the bowel*, from the body of a young man who died shortly after admission to the Pennsylvania Hospital. He had been ill on board ship about ten days, with obstinate constipation, apparently arising, so far as the history could be obtained from his friends, from some obstruction of the bowel, but had received no treatment.

At the autopsy, the upper two-thirds of the small intestine were found distended to about the size of the colon; the contents were fluid, and the coats congested. In the right renal region there was a sharp twist, the tube being bent directly on itself, and it was at this point bound by a slight inflammatory band, which prevented any movement of the bowel and maintained a perfect occlusion of the intestine. There were a few inflammatory adhesions in the neighboring parts, but these other bands did not seem to make such perfect obstructions as the one previously mentioned. The calibre of the lower part of the intestinal tube was much reduced in size. The colon contained considerable solid matter of a whitish color.

The PRESIDENT asked Dr. Longstreth whether the band was in such condition that by its section it was possible life might have been saved.

Dr. LONGSTRETH thought it was.

The PRESIDENT considered this a very important point to be noted, because cases of this kind of obstruction were not uncommon, and usually the seat of the obstruction was such as to render it accessible by a comparatively small incision through the abdominal walls in the left iliac region. Fortunately, several cases have been recently reported where the operation has been performed with success.

Dr. J. H. PACKARD presented a *basilar artery* from which there had been *cerebral hemorrhage*, removed from Miss H. L. C., æt. 73, who was found dead in her room, lying on her face, near the washstand, early in the morning of November 16, 1873. There were evidences of her having vomited just before her death.

She had been under his care in the summer of 1872, with symptoms of hypochondria, no physical cause being assignable. Afterwards she was seen by Dr. A. H. Smith. At the time of her death she had been for some time under the care of Dr. J. C. Morris, on account of debility, insomnia, and hepatic derangement; but these symptoms had in very great degree disappeared, and she had, on the evening previous, seemed to be quite well.

By Dr. MORRIS'S request, Dr. P. made an autopsy, seventy-two hours after death. Present, Drs. Morris and Horace Williams.

Head.—Dura mater adherent to the calvaria. Arachnoid opalescent, with serous effusion everywhere beneath it. A very large clot of blood covered the whole base of the brain, the base of each anterior lobe, and the sides of the hemispheres, extending into the anfractuositities as well as into the third and fourth ventricles. The spinal canal also seemed to be full of clot.

The left vertebral artery was about four times the size of the right (enlargement of the left, or contraction of the right?). The basilar artery was of full size; Dr. Morris thought it dilated. Near its middle, on the left, was an orifice, by which the escape of blood had in all probability taken place. The cerebral hemispheres and cerebellum appeared on section to be normal; but the optic thalami, corpora striata, and crura cerebri were decidedly softened. The lateral ventricles were full of bloody serum, and the choroid plexuses distended with dark clot.

Thorax and abdomen.—Costal cartilages ossified; lungs entirely non-adherent and normal, but presenting some hypostatic congestion; heart healthy, although slightly softened; valves normal, aorta very slightly atheromatous just at its root.

The space between the layers of the lesser omentum was filled with a mass of solidly coagulated blood, which extended up along the œsophagus, gradually becoming more and more slender, to a point about three inches above the diaphragm. At this point a vessel must have given way; but there was no ulceration or other visible cause for hemorrhage, nor could the vessel itself be detected.

The liver was enlarged, fatty, and in an early stage of cirrhosis; the kidneys were simply congested.

The uterus and ovaries were extremely small; the left ovary especially.

The PRESIDENT asked whether there might not have been injury to any of the abdominal viscera in the act of falling, since the occurrence of large intra-peritoneal hemorrhage following injuries to the abdomen is sufficiently familiar.

The PRESIDENT asked Dr. Hutchinson whether hemorrhages from the basilar artery were not rare.

Dr. HUTCHINSON replied that they were rare, and that, were it not for the difficulty of accounting for the hemorrhage in any other way, he should think the rupture must have occurred in the removal of the brain.

The PRESIDENT said the pressure of the clot was

difficult to explain upon any other supposition than that of rupture.

Dr. PACKARD said he had used much care in removing the brain.

Dr. HUTCHINSON said aneurisms of the basilar artery were not very uncommon, there being at least twenty-five cases on record. In this case the artery appeared slightly dilated, but there was certainly no aneurism.

Dr. PACKARD further said that he had twice reported to the Society cases of hemorrhage from the œsophagus which had produced death. One was that of a man of intemperate habits, while the second was that of an old lady who had led a life of abstinence. In both there were erosions of the lower part of the œsophagus, in which the giving way of a vein had produced enormous and fatal hemorrhage.

Dr. R. M. BERTOLET exhibited sections from a *poly-poid tumor* removed from the *trachea per vias naturales*: a report of the case will appear among the original communications of a future number of the *Times*.

GLEANINGS FROM OUR EXCHANGES.

EXTRAVASATION OF URINE (*The Lancet*, January 17, 1874).—Mr. Wm. S. Savory believes that in cases of rapid extravasation of urine due to laceration of the urethra from a blow or fall on the perineum, the first step is to make free incisions into the infiltrated cellular tissue, wherever there is most evidence of mischief; always one or two in the perineum near to the point whence the urine escapes, two or more in the scrotum, and others elsewhere if required.

The escape of decomposed urine is almost always followed by great relief, and an entire change in the patient's condition. Suppuration and sloughing of the cellular tissue will necessarily follow, and will be extensive in proportion to the time which elapsed before surgical interference. No further measures are at the time called for, beyond poultices or antiseptic fomentations and nourishment, with stimulants, if needful, and perhaps opium.

Many surgeons introduce a catheter at once and retain it in the urethra, with the idea of giving that canal an opportunity of closing around it; but this plan is almost always productive of mischief. It has been said to prevent the subsequent formation of stricture at the point of injury; but it is very doubtful whether it has any such influence, while both its introduction and retention are very dangerous procedures. If the stricture does form later, as is almost invariably the case, the patient is in a far better condition for undergoing the operation of dilatation, or even of external perineal urethrotomy, than at a time when he is suffering from the effects of urinary extravasation.

POST-PARTUM HEMORRHAGE (*The Edinburgh Medical Journal*, December, 1873).—Dr. J. Matthews Duncan enunciates the proposition that uterine hemorrhage of the ordinary post-partum kind never takes place from the uterus when it is in a state of moderately firm general contraction.

He believes the following to be frequent sources of error: 1. Variations in the bulk of the empty and contracted uterus: an observer having a preconceived idea of the bulk of the empty uterus may, in an individual case, if judging from size, be greatly deceived. 2. Variations in position of the uterus after delivery. If the uterus has sunk into the true pelvis, it may appear small and contracted, when it is merely collapsed and depressed in the abdomen. If the uterus is high in the abdomen, which is often a consequence of repletion of the bladder, it may appear to be larger than it really is. 3. A uterus

may be hard and feel as if contracted, when the hardness is merely the result of passive tension. This is often seen in cases of hour-glass contraction, and of inversion. 4. Great and even fatal hemorrhage may be erroneously supposed to be ordinary post-partum flooding, when it is really running from an unsuspected source, as a perineal artery. Among such sources are injuries of the cervix, of the vagina, of the perineum, of the nymphæ, aneurismal bursting, so called varicose hemorrhage, uterine hæmatocele, etc.

ANTI-FEBRILE METHODS IN THE FEVERS OF CHILDREN (*Boston Medical and Surgical Journal*, February 12, 1874).—In typhoid fever Ziemssen uses a bath gradually cooled down, beginning with 95°, to 86°, and has often found that by diminishing the temperature to 83.7° the temperature of the child has been lowered two to three degrees for four or five hours. Jürgensen uses, in certain forms of pneumonia, a temperature of 86° lowered to 77°, of twenty minutes' duration, always obtaining a considerable reduction of heat for a relatively long time. In very severe cases, where the temperature is continuously high, or where it rises rapidly, as in typhoid fever, scarlatina, pneumonia, and certain cases of acute rheumatism, these moderately cool baths do not suffice, and more energetic measures become necessary. In his own child, the temperature rising rapidly to 104° after a bath of 66°, he did not hesitate to lower the temperature of the bath to 42.2°. In one hundred and ten cases of croupous pneumonia thus treated with baths, quinine, and wine, there were only four deaths, and in three of these the pneumonia was the sequel of other diseases. He always gives wine before and after the bath.

COUNTER-IRRITATION (*The British Medical Journal*, January 10, 1874).—The conclusions to which Naumann's experiments on counter-irritation have led him may be summed up as follows: 1. The therapeutic action of epispastics in general is accomplished through reflex paths and by the participation of the central nervous organs. 2. These means exert a distinct influence on the heart and vessels in proportion to the irritability of the individual; *a.* Strong irritation *lowering* their activity (weakening the cardiac contractions, dilating the vessels, and retarding the blood-current); *b.* Weak irritation *augmenting* it (strengthening cardiac contractions, contracting the vessels, accelerating the blood-current). 3. The part of the skin upon which the irritation is made to act is, for the most part, wholly indifferent. Variations in intensity alone influence therapeutic results. By increasing the irritation beyond a certain point we obtain a totally different kind of action from that with which we started.

BROMIDE OF POTASSIUM IN EPILEPSY (*The Practitioner*, January, 1874).—Prof. Binz details the following results, obtained by Dr. Clouston, in the treatment of twenty-nine insane epileptics with bromide of potassium:

1. The total number of fits gradually fell to one-sixth of their average number. 2. In one-fourth of the cases the mental state was greatly improved. Irritability and tendency to sudden violence were wonderfully diminished where they had been very bad. 3. None of the patients suffered in general health except five, in whom the ill effects produced were torpor of mind and body, drowsiness, increase of temperature, loss of weight, loss of appetite, and, in three, slight double pneumonia. 4. All the good effects reached their maximum in adults at thirty-grain doses three times a day: more than this seemed to do some harm.

TRANSFUSION IN POST-PARTUM HEMORRHAGE (*The Lancet*, January 17, 1874).—Dr. William Highmore suggests that in cases of post-partum hemorrhage, when

transfusion is indicated but when there happens to be no available source of blood-supply, the hemorrhagic blood of the woman defibrinated and warmed to the proper temperature would answer admirably for the emergency.

MISCELLANY.

TEMPERATE TEMPERANCE.—The only sensible attempt to solve the problem of the liquor-traffic, that we know of, is the Swedish one. Till recently, every family in Sweden could distil its own brandy, and paid no duty on it. Since the abolition of this privilege, and the consequent establishment of public houses, a united effort has been made, with the help of the government, to check the gross intemperance of the people. The number of public houses in a given district, the days and hours at which they are to be open, and the conditions under which they may sell, are all fixed by law, and the privilege of opening these is disposed of at public auction. An association of the friends of temperance buy the privilege, and keep these houses in their own hands. Pure liquors only are sold, and coffee and other beverages are to be had over the same counter. Rooms are kept pleasant and cheerful; innocent games and newspapers are furnished their guests, and every care is taken to make the place one to which the workingman can bring his family and meet his neighbors socially. On the other hand, it is the purpose of the managers to restrain rather than promote intemperance. The counter is not covered with raisins, pretzels, salt crackers, and other provocatives of thirst. Men are not pressed to drink, and the man who has had "enough" can have no more at that time. The net profits are expended on works of local charity.—*Penn Monthly*.

A FOREIGN contemporary records a fatal instance of the use of a uterine injection of perchloride of iron. Peritonitis supervened soon after administration, and death occurred in thirty hours.—*The Lancet*.

OFFICIAL LIST

OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U.S. ARMY, FROM MARCH 3, 1874, TO MARCH 9, 1874, INCLUSIVE.

BAILY, E. J., SURGEON.—To report in person to the Commanding General, Department of California, for assignment to duty. S. O. 45, A. G. O., March 2, 1874.

BREWER, JOHN W., ASSISTANT-SURGEON.—Assigned to duty as Post-Surgeon at Fort Warren, Boston Harbor. S. O. 49, Military Division of the Atlantic, March 5, 1874.

GARDNER, W. H., ASSISTANT-SURGEON.—Assigned to duty at Fort Union, N. M. S. O. 34, Department of the Missouri, March 5, 1874.

WILSON, A. V., ASSISTANT-SURGEON.—Granted leave of absence on Surgeon's Certificate of Disability, for sixty days. S. O. 47, Military Division of the Atlantic, March 3, 1874.

CLEARY, P. J. A., ASSISTANT-SURGEON.—Assigned to duty at Camp Supply, Indian Territory. S. O. 34, c. s., Department of the Missouri.

MUNN, C. E., ASSISTANT-SURGEON.—Assigned to temporary duty at Fort Independence, Boston Harbor. S. O. 49, c. s., Military Division of the Atlantic.

SIMPSON, JOSIAH, SURGEON.—Died at Baltimore, Md., March 3, 1874.

SATURDAY, MARCH 21, 1874.

ORIGINAL COMMUNICATIONS.

THE ANATOMICAL, PATHOLOGICAL, AND SURGICAL USES OF CHLORAL.

Read before the Pathological Society of Philadelphia, March 12, 1874.

BY W. W. KEEN, M.D.,

Lecturer on Anatomy in the Philadelphia School of Anatomy.

I. ANATOMICAL USE.

IN August last, I think, I saw a scrap in a journal simply stating that chloral was an excellent antiseptic. I made no note of it at the time, and almost forgot it till I had a case of caries of the tibia (reported below) in which I desired such a disinfectant, and it occurred to me to try it. The result being satisfactory, when I came on duty at St. Mary's Hospital in October I tried it on a number of cases (some of which are reported below), and then tried the following experiments with it in my office with a view to its possible use in the dissecting-room.

Experiment I.—October 22, 1873, I placed some mutton with pure water in a bottle, corked it loosely, and stood it on my office table, exposed, say, to an average temperature, day and night, of 65°, as a comparative experiment. In four days it smelt very badly, and in seven was disintegrated.

Experiment II.—Same date. Mutton in a solution of chloral, gr. ij to f3j of water, and exposed to similar conditions. November 1 (ten days), slight mould. December 8 (forty-eight days), slight smell. December 25 (sixty-five days), entirely decomposed.

Experiments III. to VI.—Mutton placed in similar conditions October 22, 1873, but in chloral solutions of respectively 5, 10, 20, and 60 grs. to f3j of water. At this date, March 12, 1874, 141 days, or nearly five months, they are all perfectly preserved, with no smell save that of mutton-fat and chloral, no mould, no disintegration. A microscopic specimen from that in the five-grain solution is exhibited to the Society, to show that the muscular structure is perfectly preserved, as are also all the others.

Experiment VII.—A condyloma, removed December 24, was washed for twenty-four hours in water, and placed, December 25, 1873, in a forty-grain solution. It is still (March 12, 1874) perfectly preserved, and with the other specimens is exhibited to the Society for inspection.

Experiment VIII.—Feeling encouraged by some success, I obtained a foetus, still-born at full term, and injected it December 10, 1873, as follows: one arm, by the brachial artery (precautions being taken of course to limit the injection to the arm), with a five-grain solution; the other arm with a ten-grain solution; one leg, by the femoral artery, with a twenty-grain solution; the other leg with a forty-grain solution; and, by the umbilical cord, the trunk and head with an eighty-grain solution. I

used in all two ounces of chloral, and of each solution I injected as much as I could, so that the skin was fully stretched, as if the part were extremely dropsical. I had here a completely comparative experiment, for all the parts of the foetus were exposed to precisely similar conditions save the strength of the injection. I left it exposed on a table in a room of average temperature of 50° to 60° Fahr. March 10, just three months later, I examined it carefully. The body appeared perfectly preserved. The skin was shrivelled a little about the finger-nails, lips, eyelids, and scrotum, from evaporation; the toes were as plump as ever; the epidermis was slightly loosened. The head and neck, which were very much congested and discolored when received (a consequence, doubtless, of its being still-born), were of the same dark color, but no decomposition had ensued; and the common toilet-pins with which I had closed the incisions by which I reached the arteries were perfectly untarnished. On opening the parts injected with five-, ten-, and forty-grain solutions, and examining them, they appeared as firm as ever, all of natural color and consistence, and the microscope ($\frac{1}{2}$) showed no change in the muscular structure even with the five-grain solution. In order, however, to have a more careful examination, I gave Dr. J. G. Richardson a scrap of muscle from the ball of the thumb in the five-grain arm, another from the twenty-grain thigh; a slice of the tongue, which, as the mouth was open, had partly dried, but was covered with a cheesy coating (hence, probably, the torula reported below), and a piece of the parotid gland. He kindly examined them with great care, with a $\frac{1}{2}$ in. immersion lens, eye-piece A, giving 1250 diameters, and reports as follows:

"A small piece of muscular tissue from the palm of the hand (five grains), teased out in a drop of chloral solution, showed the individual fibres with remarkable distinctness, the transverse striations being unusually well defined, and the whole structure quite free from granular or other degenerative change. (The specimen was shown by the class microscope.)

"A similar fragment from the thigh, injected with a twenty-grain solution, was likewise admirably preserved.

"A thin section from the tongue exhibited muscular fibres in the same state of complete preservation; and in these, by the aid of acetic acid, the oblong and rectangular nuclei under the sarcolemma were clearly brought into view. A minute shred snipped out from the upper surface of the tongue displayed the filiform papillæ very distinctly, and furnished numerous cells of tessellated epithelium, presenting all the characters of epithelium in a drop of fresh saliva. Multitudes of isolated torula spores and a few short chains of torula accompanied this section.

"A thin section from the parotid gland showed the lobules of the glandular tissue almost unaltered, and, on the addition of acetic acid, the usual sharp definition of the nucleus in each gland-cell was obtained."

(An incision was made into one leg, and the above gross appearances were shown to the members.)

I have coated one arm with varnish and the other with rubber dissolved in benzole. I propose, after having exhibited it here to-night, to place one leg in a bag of saw-dust and the other in a bag of sand, and leave the remainder of the body exposed to evaporation during the next few months of hot weather. This will give me the means of determining whether the chloral will preserve the subjects in hot weather and of testing the best means of preventing evaporation. The results I will communicate to the Society in the fall of this year, whether they be good or bad, together with the results of any other experiments.

Experiment IX.—A negro subject was brought to my anatomical school February 23, 1874, in good condition as to preservation, but with the entire spinal cord removed, one leg off above the knee, and one femoral artery opened. It was therefore a very unfavorable subject to begin on, as so much of the solution must escape through, at least, the small arteries, which were cut. A half-pound of chloral, in the strength of 15 grs. to f3j of water, was injected by the carotid the same day. The body was placed on the dissecting-table March 2, and has been almost entirely dissected since then. The cuticle was very firmly adherent. The muscles were of the most life-like color, a little flabby perhaps, but not in the least easily torn. All the other parts, also, were of the natural color, texture, and condition, so that, for example, the aortic and other sympathetic plexuses were readily dissected. The odor of chloral was perceptible, but not at all offensive. March 7, the viscera were removed, and, instead of the usual fetid odor, which is so annoying, especially from its persistence on the hands, there was scarcely any smell. It was but slightly that of chloral, and was not disagreeable. This was twelve days after the injection. (Specimens shown.)

Experiment X.—A negro died in the city February 18, and lay exposed during the warm weather we had then till February 28, when he was brought to my rooms. The cuticle was off over all the chest, which was green and crepitant, and the legs were dropsical. A more unfavorable subject for preservation I have rarely had. Though a large man, I tried the chloral, on February 28, in the same strength and amount as in the last case, viz.: gr. xv to f3j. March 12,—i.e., twelve days after injection and twenty-two days after death,—the subject is perfectly preserved. The cuticle elsewhere is adherent, the chest is natural in color, the smell is gone, and the specimen of muscular tissue which I exhibit, though taken from the abdominal walls, the most unfavorable part of the body, is of admirable color and consistence.

The next subject I obtain I shall inject with one-fourth of a pound of chloral, and instead of the ordinary amount of water (a gallon to a gallon and a half), I shall dissolve it in not less than eighteen or twenty pints—that is, about five or six grains to 3j; for my short experience seems to show that if the parts are fully and most completely distended they are preserved better, probably because the chloral

penetrates more thoroughly into every minute capillary. In order to give a little more firmness to the muscular tissue, I shall also inject a pound or two of starch, dissolved in water and mixed with the chloral solution, and make a future report of the results.

It is important that I should not be understood to claim, as yet, that chloral will answer for the dissecting-room, to the exclusion of everything else. I have not had any experience beyond the mild winter we have so far had, and during a period of five months. What effect the hot weather of summer, with its moisture, will have, I cannot yet say, but hope to do so in the fall. Thus far I can claim for it entire superiority, in the winter-time, for all dissections, and especially for the finer and more delicate ones of the skilled anatomist. Its comparative merits may be summed up as follows:

1. *Cost.*—The price of chloral is about two dollars and fifteen cents per pound; and if one-half or one-fourth of a pound will do for each subject, the cost will be from one dollar to fifty cents for each subject. Chloride of zinc, or arsenic, costs about fifty cents for each subject.

2. *Condition of the tissues.*—Zinc hardens, discolors, and decolorizes the tissues to such an extent that, for both dissection and operative surgery, they are rendered totally unfit to give a student the proper notion of their normal color and consistence. Besides this, many parts, such as the axilla, with its entanglements of blood-vessels, nerves, muscles, glands, etc., important to be well dissected, are in such a discolored, dirty condition as hopelessly to bewilder the most earnest student. Alcohol is better than zinc, but it also hardens and decolorizes. Arsenic, also, is better, but the tissues become very soft and offensive in a little while, besides the frequent annoyance of local poisoning about the fingers. Salt and nitre subjects have the same objections (except the poisoning), and also nearly always mould in a short time. Chloral keeps the color perfectly, and the parts are of their natural consistence for at least three months, and probably much longer. By this means far more delicate and useful dissections can be made, and the student has a correct idea of the condition of the parts just as they were in life.

3. *Subsequent injections* into the arteries, etc., can be made with far better effect, since none of the arteries are at all contracted as they are by the astringent action of zinc; and the injection will therefore penetrate much farther.

4. *Permanent preparations.*—I have not yet had time to try this question, and so I do not know how it may act as to heat, moisture, vermin, etc.; but so far as finer dissections and finer injections are concerned, it would seem to promise well.

5. *Odor.*—The chloral odor, in a single subject, is not strong enough to be disagreeable, but how it may be with a roomful of them I am not prepared to say. I intend, however, to try the effect of some of the essential oils, such as cloves, bergamot, rosemary, etc., or a mixture of them; for a fragrant cadaver may entice some otherwise indifferent students to a more thorough study of its texture and tissues.

6. *Instruments and clothing.*—The destructive ac-

tion of zinc* in dulling the edge of the best knives, and thus worrying the dissector by the constant use of the hone, or, more frequently, making him careless and slipshod, is well known. Chloral does not affect the knives in the least; and even toilet-pins, after three months in the subject (Exp. VIII.), were not corroded in the least.

II. PATHOLOGICAL USES.

Besides the experiments detailed above, I asked Dr. Richardson to examine some pus, which I obtained from the Philadelphia Hospital through the kindness of Dr. Miller, on March 4, 1874. The following is his report, the examination being, as before, with the $\frac{1}{25}$:

"*Experiment XI.*—A specimen of pus from an acute abscess, preserved for six days in a five-grain solution of chloral, contained multitudes of well-formed pus-leucocytes, numerous dead (at least motionless) Bacteria from $\frac{1}{20000}$ th to $\frac{1}{2000}$ th of an inch in length, and considerable quantity of granular matter.

"*Experiment XII.*—A specimen of pus preserved six days in a twenty-grain solution presented precisely identical appearances; and since the Bacteria were about equally numerous, it seems probable that they had developed in the purulent fluid *before* it was mingled with the solution of chloral. On adding acetic acid or aniline to these specimens of pus, the ordinary reactions were manifested,—*i.e.*, the brightening of the nuclei or tinging of the nuclei and the cell-walls."

My own examination coincided with his.

Experiments XIII. and XIV.—I examined pus from a chancre, and also pus from an ulcer, with precisely similar results.

These experiments, as well as those given before, but especially the microscopical results as determined by Dr. Richardson and myself, at once suggest the query whether chloral in solution may not replace alcohol in the preservation of permanent wet preparations in our anatomical and pathological museums. It will be observed that the solutions varied from five to eighty grains in strength; the specimens were mutton, a condylomatous tumor, human muscular, epithelial, and glandular tissues, pus from an abscess, an ulcer, and a chancre; the time varied from six days to one hundred and forty-one days; the conditions were unfavorable for their preservation: yet not only were they all preserved macroscopically, but even the delicate cellular tissues were preserved microscopically; and, further still, the Bacteria already developed were killed even by a five-grain solution. Whether this preservative power will hold good for all sorts of wet preparations, for a longer time and in hotter weather, I do not yet know, but it will certainly do so for those named for five winter months, and probably longer.

If we can use it in place of alcohol we gain very greatly, first, in the lessened expense; for a solution of ten or twenty grains to the ounce is far less expensive than alcohol, and the bottles, instead of

being hermetically sealed, need only be closed by glass stoppers, or even by ordinary corks. Secondly, this renders them entirely accessible for study at any time, whether in investigating any particular subject or specimen or for exhibition to a class; and any teacher who has used permanent preparations, hermetically sealed in expensive bottles, which cannot be passed from hand to hand, which are distorted by the refraction of the liquid and the round glass, and not to be got at to examine accurately what we wish to study, well knows how comparatively useless they now are, and how useful they will be if chloral should make them accessible. If evaporation take place, the solution is meantime becoming stronger, for only the water and not the chloral evaporates; and an annual or semi-annual inspection of the museum, with the addition of either water or the chloral solution, will remedy any such trouble. I do not think that chloral in solution changes chemically within at least a year. I have used in some of my experiments solutions in water nearly six months old, and have had patients take the syrup from an old bottleful obtained a year before, without any perceptible change in its action.

In pathological investigations of various fluids, such as pus, urine, blood, the fluids in dropsy, etc., a few grains put into the fluid may be sufficiently preservative, and enable us to keep them for a much longer time for more careful observation. I would suggest that about five or ten grains to an ounce of the fluid would be enough; and it would be better to add it in crystals, for if added in solution it might change the specific gravity of the fluid, and so affect the integrity of the more delicate morphological elements. I would also suggest whether a solution of proper density—varying with the objects to be preserved—might not be of great service for mounting microscopical preparations. Neither of the last two suggestions have I tried myself, except with the pus, which has kept perfectly for eight days; but both are, I think, well worth the trial.

III. SURGICAL USES.

When I commenced my investigations into the action of chloral, I had seen nothing published but the little scrap which filled out a column in a journal, although since then I have seen several notices of its surgical applications.† Yet, as my observations are independent in character, confirm the results obtained by others, and show the value in surgery of a remedy as yet new, I venture to append a few of the more striking cases in which I tried it; in some with good results, in others bad. It acts, first, as a complete deodorant within a very short time, by what chemical action I do not know; secondly, as a stimulant, so that what was a foul, sluggish ulcer will become, in from two to three days, a fine, red, healthy, granulating sore. But it must not be used too strong, or it may become a decided irritant, as any one who has ever taken a dose would naturally expect. I have generally

* Zinc being our most common injecting material in Philadelphia, I use it mainly for comparison.

† London Lancet, August 30, 1873, p. 311; Amer. Jour. Med. Sci., October, 1873, p. 531, and January, 1874, p. 261; Med. News and Lib., February, 1874, p. 27; Phila. Med. Times, February 19, 1874, p. 326, etc.

found that gr. x to f3j of water (or, in private practice, some fragrant water) is quite strong enough. In some cases even this, which is about a two per cent. solution, is too strong, and has to be diluted. The results of the cases below were most marked in those with foul, unhealthy, ill-smelling discharges, which were changed quickly to healthy-looking sores, with excellent and yet moderate, not abundant, pus. In fact, in every case the discharge was, I think, considerably diminished. I did not find, I think, that the sores healed any more rapidly than they ordinarily would. The application seemed rather to change an unhealthy sore which was stationary, or even enlarging to a healthy one, in the proper condition for the healing process, which soon began and went steadily forward. In no case was its hypnotic action shown.

Whether it will at all destroy the specific poisons, such as that of a chancre, I do not know, for I had no opportunity to try it in the hospital. That it would do well in open buboes, as ulcers, I have no doubt; but the best test as to its possible destructive powers on the virus would be to try the auto-inoculability of a chancre which had been treated by chloral dressings.

I have found the mucous membranes also, as would naturally be supposed, more sensitive to its irritant properties than the skin, but not so much so in some cases as would be expected. In fact, I think it must be tested by experience in each individual case.

Cases I. and II.—One, a case of long-standing caries of the tibia, with very ill-smelling discharge; the other, of caries of short duration, but equally bad discharge. I used the chloral (gr. x to f3i) both as an external application, by which alone nearly all smell was prevented and discharge diminished, and later, in the same strength, as an injection into the sinuses. The injection did not irritate, but yet did no appreciable good other than the external application had already done, though continued for nearly a month.

Case III.—A case of psoas abscess (in which for four years the woman had worn a truss by a physician's direction, for a supposed hernia!). On admission, the abscess was discharging, in the groin, a very offensive pus in large quantities. A ten-grain solution was applied externally, and the odor completely disappeared at once, greatly to her own comfort, as well as that of the other patients in the ward. The discharge also certainly lessened, but I scarcely think it could be from the external application. It must have been from some other cause. As other injections had proved irritating, and she was rapidly sinking, I did not try the effect of an injection of chloral.

Cases IV. and V.—Two cases of large, filthy, and foul ulcers of the leg. I used a ten-grain solution as both a wash and a dressing; in one case mixed with a poultice, in the other simply by a compress, wet with the solution. The poulticed case did so well that all smell disappeared, the ward was freed from its previous contamination, and the ulcer did well. In the other case I had tried transplantation of skin, and four out of seven grafts had taken root. The continual application of the ten-grain solution on the compress was certainly too strong, for it not only destroyed the skin-grafts, but irritated the adjacent skin considerably. Generally, however, I have not found the constant dressing with the ten-grain solution too strong.

Case VI.—Rupial ulcers, of about the same size, on

the leg and arm. As a comparative test, I applied a ten-grain dressing of chloral to one, and touched the other with nitrate of silver, dressing it with simple zinc ointment. They did about equally well.

Case VII.—This was, I think, the best test of all, so far as the deodorizing properties of chloral are concerned. I do not say *disinfecting properties*, for I suppose that this is a question for the chemist rather than the surgeon. A young woman was infected by her husband with syphilis, and then he attempted a mercurial treatment. He so far succeeded that when she entered the ward, as I was making my visit, I found half of the teeth out, the rest ready to drop out, the gums sloughing everywhere, and necrosis both of the upper and lower jaw so far progressed that the upper jaw was loosening from all of its attachments. The smell was, I think, as bad as any I ever encountered, and the whole ward was filled with it in a very short time. I gave her a ten-grain solution of chloral as a mouth-wash, and on my visit the next day I could approach within six or eight inches before I was conscious of any odor. Yet the cause of the smell was constant, and the use of the wash intermittent. It was so grateful to her that she used it every fifteen or twenty minutes. The remaining healthy mucous membrane was not irritated. No hypnotic effect was visible from either absorption or the small amount probably swallowed.

Case VIII.—Gonorrhœa. In only one case of this kind have I tried chloral. I directed a one-grain solution, which so irritated the urethra that the patient would not allow its further use; but he was nervous about it, as I had inadvertently told him what I intended to use, and I scarcely trust his report. Parona,* however, reports an extensive use of it since 1870, in men and women, with the best results, in a strength of one per cent., *i.e.* about 5 grs. to f3i.

My friend Dr. Macpherson has tried it in several cases, and reports to me as follows:

Case IX.—Cauliflower excrescences of os uteri, with large hemorrhages and great fetor. During thirteen months he had tried numerous remedies. The only effective deodorant was potass. permang., and this, even in so weak a solution as gr. ½ to f3i, would irritate the parts so as to re-establish bleeding. He used chloral, gr. v to f3i. The odor was at once destroyed, no bleeding resulted, the discharge lessened greatly, and changed its character to good healthy pus; pain was relieved, and she became able to walk about in ten days.

Cases X. and XI.—Both of long-standing ozæna in scrofulous subjects. A solution of ½ gr. to f3i, by the nasal douche, proved irritating, and they were indisposed to allow further trial.

Case XII.—Syphilitic condylomata on the penis. The smell was almost intolerable from the mingled odors of the smegma and the condylomata. After washing with water, a ten-grain solution of chloral was applied, and the odor entirely removed. A slight balanitis occurred, which subsided on reducing the solution to 5 grs. The warts were removed, chromic acid was applied, chloral being used as a dressing, and the patient was well in four days, except one very small spot, which soon healed.

Case XIII.—Non-specific severe vaginitis in a child 4 years old, of strumous constitution. An injection and wash of 4 grs. to f3i was used, and no other treatment, and in two days the patient was nearly well.

Dr. Goodell also informs me he has used it considerably of late, and it does admirably as an antiseptic, deodorant, and stimulant.

* Med. News and Lib., February, 1874, p. 27, from Med. Times and Gazette, January 3, 1874, from Giorn. Ital. della Mal. Vener., October, 1873.

SKIN-GRAFTING.

BY R. J. LEVIS, M.D.,

Surgeon to the Pennsylvania Hospital and to the Wills Ophthalmic Hospital.

THE operation of skin-grafting is now conclusively accepted as one of the resources of surgery. The utility of the transplantation of minute pieces of skin to granulating surfaces has been demonstrated in a vast number of instances. It is admitted that by creating centres of eccentric cicatrization on extensively ulcerated surfaces the rapidity of the healing process can be much increased. Ulcers of a chronic character, which have obstinately resisted cicatrization in a concentric direction, can be healed by the ingrafting of new centres of germination in the midst of the areas of ulceration. Experience has also shown that the procedure is applicable to plastic surgery, in facilitating the cicatrization of surfaces denuded by gaping, in the division of cicatrices, and in the sliding of flaps of integument.

Besides the increase in the rapidity of healing, due to extending the lines of cicatrizing edges, a decided and important physiological influence is exerted by the presence of the grafts on ulcerated surfaces. The surface of an indolent ulcer seems to be stimulated to renewed vital action, and the increased healing impulse even influences to active termination the peripheral limits of an ulcer in which granulation has long entirely ceased.

The utility of skin-grafting has, in my observation, been in no instances more demonstratively shown than in cases of extensive denudation caused by destruction of skin, as in burns, and of loss of large areas of integument from traumatic injuries. In the case of a man whose back was extensively charred at a lime-kiln, while lying under the toxic influence of its emanations, the sloughing integument having left an immense area of ulceration over his dorsal and lumbar regions, the successful engrafting of numerous minute pieces of skin healed the vast ulcer with astonishing rapidity. In an instance of the entire loss of the skin of a leg, caused by deeply burning with coal oil, which had filled a shoe and saturated a stocking, the healing process was by the same procedure rendered as surprising and satisfactory.

It seems now probable that amputation, which, as a final resource, is by surgical authority justified in certain cases of extensive ulcers of the leg which all expedients have failed to heal, may be substituted by the simple device of skin-grafting.

All of the conditions essential to successful skin-grafting I have not, after extended observation, fully determined. The most favorable condition for the development of the grafts is certainly that of healthy, active granulation of an ulcer; and the more nearly this state is approached, the greater, as a rule, will be the success. The grafts, however, occasionally fail, for incomprehensible reasons, on surfaces of perfectly healthy granulation; and yet I have repeatedly succeeded in developing such healing centres in the midst of ulcers of general unhealthy aspect, even where ulceration was actively

spreading at the circumference. An instance of effective grafting on an unhealthy surface was once illustrated to me on one of a number of chronic syphilitic ulcers of rupial character located on the arm.

As an illustration of ineffectual grafting on a healthy surface of granulation, I recall the case of a young woman, admitted to the Pennsylvania Hospital, whose almost entire scalp was torn off by her hair being caught in the cog-wheels of the machinery of a factory, leaving an exposed surface of pericranium. I failed, after many attempts, in inducing grafts to retain their vitality. The granulating surface was in a healthy condition, and grafts, more than one hundred in number, from the patient's own skin and from that of several other individuals, were repeatedly tried without success. The experience I have had since that case was under my control would now induce me to try grafts taken from *another scalp*, as it seems that grafts from similar localities, as from one eyelid to a loss of integument or a plastic operation on a corresponding part, retain their vitality almost certainly. I may here, however, remark that the transplantation of hair-follicles has, I believe, in all experience, uniformly failed.

The influence of the grafts in vitalizing the surface of chronic ulcers may be demonstrated by consecutively repeating the transplantations as the process of granulation becomes sluggish, each grafting exciting a renewed healing impulse, and preventing the tendency to relapse into indolence until the entire surface is cicatrized. I am inclined to think that with this kind of persevering repetition there must be few chronic ulcers, whatever may be their condition or location, which cannot be healed.

One of the beneficial claims for skin-grafting is with reference to the avoidance of the eventual contraction which disfigures, deforms, and impairs motion after extensive loss of integument. Observation seems to show that where cutification is rapid from a number of skin-forming centres the resulting cicatrix is less violently contractile in its tendency.

Some operators have experienced disappointment in the grafting procedure, on account of the liability of the newly-healed surfaces to a rapidly destructive ulceration under slight disturbing influences. I have seen a number of illustrations of the susceptible and readily-perishable nature of the rapidly-healed spaces. In one case of extensive and rapidly-healed surface, I saw the whole delicate cicatrix seem to dissolve and disappear almost within the period of a single day, during the existence of a general feverish exacerbation violently affecting the patient.

The delicacy and susceptibility of the newly-formed tissue are merely incidental to its neoplastic character; and the practical lesson to be impressed is the careful avoidance of local and constitutional influences that may destroy it.

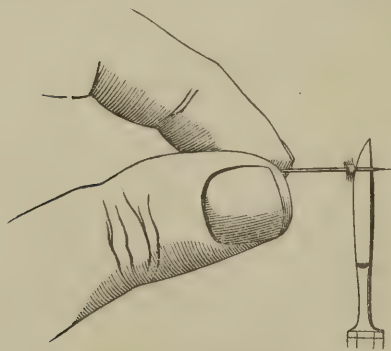
In regard to the previous preparation of the surface of a chronic ulcer for the reception of skin-grafts, the more nearly it is brought to a normally

granulating condition the more likely is success to follow; nevertheless, much reliance may alone be placed on the vivifying influence of the simple presence of the grafts on indolent surfaces.

For successful skin-grafting, it is simply essential that a minute portion of skin be removed from a sound part of the body of the patient, or from another individual, and placed on an ulcerated surface. It is customary to take the pieces to be transplanted from the patient's own skin; and I have generally chosen locations where the derma is thin, and not densely covered with cuticle, as on most of the front of the body, and, as a choice, from the inner surfaces of the arms and thighs. Grafts from the integument of other individuals develop as readily, and I have frequently practised removing them from limbs amputated for traumatic injuries, with apparently equal success. To avoid the possibility of conveying some form of specific infection by the process, it is certainly, as a rule, most advisable to transplant only from the patient's own skin.

A graft of skin should merely consist of the simple structures of cuticle and derma, and should avoid the underlying fatty and connective tissues. That even the whole thickness of the derma is not essential, is demonstrated by the fact that successful grafting has been effected by using mere scrapings of the cuticle, in which are contained some cells of the superficial or papillary layer of the derma; but the practice is uncertain, and has not practical merit. The thickness of the true skin on the front of the body, it should be borne in mind, does not average more than from a quarter to half a line, and this depth should never be exceeded in the removing of grafts.

The operation of removing the portions of skin for grafting may be done by a knife or scissors, cutting off minute particles of the size to be used immediately in transplanting; or by taking a larger piece which is to be afterwards subdivided. I formerly practised the removal of skin for grafting by seizing the skin with delicate forceps and snipping off a piece with small scissors, using the fixation forceps and curved scissors of ophthalmic practice. The fragment removed was then spread on any convenient surface, as on the flat extremity of the

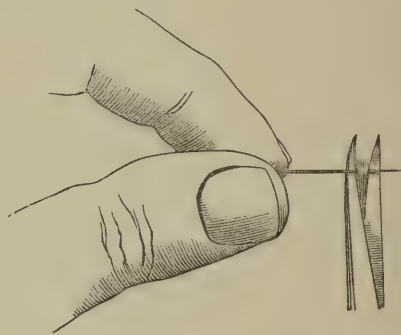


handle of a scalpel, and subdivided into pieces varying in size from that of a grain of canary-seed to that of a grain of rice.

To facilitate the detaching of pieces of skin on the above plan, Mr. Bryant, of Guy's Hospital, London, has devised an instrument in which the forceps and scissors are combined, and which accomplishes the object at a single movement.

During the last year I have adopted a method, first suggested to me by Dr. C. H. Thomas, of this city, which, for simplicity, convenience, painlessness, and effectiveness, may well displace all others.

It consists, as seen in the cut, in merely penetrating the *cuticle* with a very delicate sewing-needle, elevating a small point, and shaving off the minute elevation of cuticle and upper stratum of derma with a very sharp knife. The same may be accomplished, but hardly in so perfect and painless a manner, by using fine scissors for the excision of the portion transfixed.



The operation, if properly performed, should be free from really painful sensation, and patients never object to its most frequent repetition. I have frequently done it without more than a tint of discoloration from blood, and blood need never actually flow from the very minute wound.

The graft is then immediately pushed from the point of the needle, and placed on the surface of the ulcer, the only care being to lay it with its epidermic surface upward. The graft need not be inserted into the granulating surface by making a wound for its reception, as has been advised and practised, for such puncture allows a flow of blood that may elevate the graft from contact with the granulations.

As simple adhesion of the graft is all that is desirable, I have sometimes, with large and actively secreting surfaces, allowed them to be exposed to the desiccating influence of the atmosphere, so that the secretion may become viscid and hold the transplanted particles securely in position. To facilitate the same object of fixation after the grafts are deposited, I have occasionally allowed the ulcerated surface to remain uncovered until they became well agglutinated to it.

All active medication to the ulcer should be avoided, and the surface of ulceration be simply covered with a light dressing, for protection from disturbing influences. For this purpose the ulcer may be covered with a piece of muslin, saturated with oil or covered with cerate, or it may be merely protected with the waxed tissue-paper, such

as is extensively used for general purposes of a dressing in the Pennsylvania Hospital.

On most ulcers the dressing need not be removed for two or three days after the operation; but when secretion is profuse, the ulcer may be washed daily, by allowing a stream of water to flow over it, carefully avoiding the wiping of the surface with sponges or cloths, which may disturb the grafts.

One of the earliest changes noticeable in the graft, after the first few days, is the detachment of its cuticle, which may occasionally be seen floating in the secretions of the ulcer, or it may be detached by a slight touch, leaving the true germinating material fixed in position. The graft, as it commences development as a germinal centre, becomes so blended and identified with the granulations as to be for a time almost lost sight of, its reappearance becoming evident in a bluish or lilac-tinted pellicle, which indicates the progress of cutification.

In regard to the size of grafts for transplanting, I have, in several instances, grafted by removing from recently amputated limbs pieces of skin measuring one-third or one-fourth of an inch square; but such large pieces are very likely to fail in retaining their vitality, and I have had much more satisfactory success with quite small grafts; and, for reasons already stated, this latter practice is certainly the best.

The number and position of the grafts will vary in accordance with the size of the ulcerated surface; and in large ulcers they may be distributed at short intervals, both centrally and near the periphery. Those near the circumference will stretch their granulations outward and stimulate the borders of the ulcer to activity; and, with regard to the advantage of centrally-located grafts, it will be well to remember their importance with reference to the difficulty often experienced in eventually healing the last of a chronic ulcer. A large ulcer, on which successful grafting has been performed, will soon present islets, from which cicatrization progresses in directions of the nearest healing-points, until all are joined by an interlacement of newly-formed tissue.

NOTES OF HOSPITAL PRACTICE.

JEFFERSON MEDICAL COLLEGE.

CLINIC OF PROF. S. D. GROSS, M.D.

Reported by J. B. ROBERTS, M.D.

SPONTANEOUS ANEURISM OF ONE OF THE BRANCHES OF THE DORSALIS PEDIS.

DAVID T., a colored man, aged 59 years, presents himself at the clinic with a tumor about the size of a small bird's egg, situated upon the external aspect of the dorsum of the left foot, and which he first observed four months ago. The tumor shows no discoloration, is without adhesions to the surrounding tissues, and appears to be connected with the thecæ of the tendons going to the toes; in fact, it resembles very much the ganglion, or cystic tumor, so often found in connection with the extensor tendons of the hand.

Upon more critical examination, however, there is perceived distinct pulsation, which is rather too evident and too diffused to be caused by transmission of im-

pulse from an artery lying immediately below the tumor, although I have seen a number of instances where a ganglion situated over the radial artery has had the pulsation of that vessel imparted to it, so that it was at first mistaken for an aneurism. In this case, however, I am nevertheless inclined to believe that the tumor is not a cyst of the sheath of the tendons, but an aneurism, involving one of the branches of the dorsal artery of the foot; for the *dorsalis pedis* itself cannot be involved, because the swelling is external to it; and hence one of its tarsal branches must be dilated.

Spontaneous aneurism of the arteries of the leg and foot is very unusual, and there is probably no case recorded where such an affection has been observed connected with the *dorsalis pedis*; though a number of instances of traumatic aneurism in this situation, particularly after venesection, have been reported.

An exploring-needle is introduced into the tumor; and the withdrawal of the instrument being followed by an escape of blood seems to confirm the diagnosis of aneurism.

It is necessary to undertake some form of operation for the cure of the affection, if it be an aneurism, because, should the patient meet with an accident causing rupture of the sac, he might bleed to death before surgical assistance could be procured. Pressure will, accordingly, be made by an assistant upon the femoral artery to arrest the current of blood, and then the tumor will be laid open with the knife; which is readily effected by carefully dividing, upon a grooved director, the overlying tissues until the tumor has been reached. The amount of blood which escapes from the incision in the tumor as soon as compression upon the femoral artery is relaxed reveals conclusively the true nature of the case, and shows the tumor to be aneurismal.

It seems impossible to separate the sac and trace out the artery by which it is supplied, and hence it becomes necessary to ligate the anterior tibial, which is accomplished by extending the incision upward, and passing a ligature around the vessel just above the ankle, where it lies between the tendons of the *extensor longus digitorum* and *extensor proprius pollicis* muscles. There is still copious hemorrhage proceeding from the recurrent circulation, which is dependent upon the perforating branches of the plantar arteries; and from the great number of ligatures required to arrest the bleeding, it would appear that the tumor has somewhat the character of an aneurism by anastomosis.

The hemorrhage, after a good deal of difficulty, has finally been controlled, and the wound will now be covered with cotton saturated with Monsel's solution, and the patient carefully watched lest hemorrhage again supervene, necessitating some further operative procedure.

This man, who was before the class a week ago, did well until to-day, when copious secondary hemorrhage occurred, necessitating the temporary introduction of three pins to arrest the bleeding.

With the assistance of Professor Pancoast I shall now try the effect of ligating the anterior tibial some distance above the point of the old ligature, which came away this morning; and then, if hemorrhage continues from the wound after these pins have been removed, it will be proper to cut down upon the part, and, making a large flap, endeavor to control the bleeding by tying the small vessels. Should this be found impossible, it will be necessary to amputate the foot, for it would not be advisable to attempt ligation of the femoral artery, since the vessels are so atheromatous and fragile that the ligature would probably separate prematurely, and the patient die from immense secondary hemorrhage.

By means of a curvilinear incision here at the lower

third of the leg, I come upon the artery about three inches above the joint, and without much difficulty pass the aneurismal needle under it, and tighten the ligature. Upon removing the pins introduced this morning, but upon which I was afraid to depend, the hemorrhage does not recur, and therefore I shall not do anything further to-day, but have the man well watched, that the occurrence of bleeding may be immediately recognized.

I have this morning, gentlemen, to announce the death of our patient with aneurism of the foot, who was before the class two weeks ago, when, as you remember, I applied a second ligature to the anterior tibial artery. This ligature was removed on the ninth day, and the man seemed to be doing quite well, with the exception that he had a severe chill on the eighth day, and that there was considerable sloughing of the wounds. He, however, died last night, and the post-mortem examination shows both wounds filled by granulations, and one of them with a slough; the anterior tibial, as well as the femoral arteries, ossified, pus in the joint, and the heart fatty, with slightly atheromatous valves. As the man had been very stupid for some time, I thought death might have been the result of embolism of the cerebral arteries; but the autopsy gave no evidence of clots in the brain, and I therefore attribute his death to pyæmia.

EXCISION OF ONE-HALF OF THE HARD PALATE FOR THE REMOVAL OF AN ANGEIOMA.

Mary McK., 6 years of age, from the State of Wisconsin, was attacked about eighteen months ago with frequent hemorrhages from the mouth, proceeding from the gum between the molar teeth on the left side of the upper jaw, and which were at times only arrested by the application of styptics.

About a year ago an operation was performed, which proved ineffectual, for, within the past few months, bleeding has recommenced and the tumor has been gradually increasing in size, accompanied with pain in the cheek and ear, but without any recurrence of nasal hemorrhage.

This tumor is an angioma, resembling the nævus that occurs in the skin, but is not an aneurism by anastomosis, which is occasionally developed in connection with the upper jaw and in the maxillary sinus, because it does not exhibit pulsation synchronous with the beat of the heart. It is impossible to determine whether or not this growth involves the antrum, for, although there is apparently no complication of the nasal cavity, the tumor may entirely fill the antrum of Highmore and be encroaching upon the nares.

An incision is made from the commissure of the lips, extending about three inches outwards towards the ear, in such a manner, however, as to preclude the occurrence of injury to the facial nerve and the duct of the parotid gland. This external wound is rendered necessary by the size of the tumor, the removal of which through the mouth would be impracticable. The facial artery, which has been divided, is secured by a ligature, and the flap dissected back to give sufficient room for the performance of whatever operative procedure may be required to extirpate thoroughly the morbid growth.

This disease appears to involve the palatine process both of the superior maxillary and the palate-bone on the left side, but without having invaded the antrum of Highmore; and therefore the excision of half of the roof of the mouth will be necessary to effect complete removal of the diseased structures. In order to accomplish this, the bone-forceps are introduced—after the incisor teeth have been extracted—into the anterior nares and the mouth, to cut through the alveolar process and the hard palate near the median line, and,

when this has been effected, are again applied so as to separate the palatine process from the body of the maxillary bone.

There is considerable hemorrhage, resulting from the division of the posterior palatine artery and the numerous smaller vessels in this situation, which will be controlled by applying styptics and plugging the antrum with cotton saturated with subsulphate of iron. If bleeding from the posterior palatine artery persists, it can be arrested by the application of the actual cautery; for the ligation of the vessel, situated, as it is, so far back in the mouth, would be impossible.

Here is the little girl from whom, two weeks ago, was removed half of the roof of the mouth on account of a tumor which was at intervals the seat of hemorrhage. After the bleeding from the wound was controlled, the edges of the incision were approximated by sutures and adhesive strips, and the patient placed upon iron, quinine, and stimulants. She has convalesced quite rapidly, and purposes going back to her home in a few days, though it would be better if she were able to remain here some time longer, so that should the growth show any tendency to reappear, which is not at all improbable, the actual cautery could be employed to arrest it.

EPITHELIOMA OF THE RECTUM.

G. M., 57 years of age, has suffered for about two years with an obstinate diarrhœa accompanied with intense pain and tenesmus, and occasionally with copious hemorrhage from the bowels; and latterly the fæces, when passed, have not exceeded in diameter the size of an ordinary lead-pencil.

The symptoms presented by the patient point towards the existence of a carcinomatous stricture of the rectum; but in order to establish the diagnosis it is necessary to make a digital examination of the bowel, which is readily done by inserting the finger, previously oiled, through the anus by a rotatory motion. At the distance of two and a quarter inches from the verge of the anus a growth is distinctly felt, forming an irregular ring around the entire circumference of the bowel, leaving only a small aperture in the centre. This is, therefore, a case of epithelioma, or scirrhus, as it was formerly called, of the rectum, which has caused by its growth an annular stricture, through which the fecal matter escapes with great difficulty.

This is the most frequent form of cancer occurring in the ano-rectal region, for the other varieties of carcinoma have been very rarely seen in this situation. The disease is usually met with in elderly subjects, but sometimes the patient suffering with this malignant affection has not attained even adult age.

In its advanced stages the disease presents characteristic symptoms, being attended by sharp, lancinating pain, difficult defecation,—though the calls to evacuate the bowels are exceedingly frequent,—and the passage of mucus, blood, and pus from the rectum. Frequency of micturition occurs from reflected irritation of the bladder; the distention of the bowels with fæces and gas gives rise to colicky pains; the fæces, when passed, are flattened in form and of small diameter, and the countenance of the patient gradually assumes the carcinomatous cachexia.

The treatment of carcinoma of the rectum is of necessity only palliative. Billroth, of Vienna, and several other surgeons, have excised the rectum for the removal of the malignant growth; but the operation is attended with profuse hemorrhage, and seems a barbarous and unjustifiable procedure, since there is so little probability of any ultimate advantage accruing from its performance.

Great relief of the symptoms can often be obtained

for a considerable length of time by breaking down the stricture with the finger, as I do in this case, or by the forcible insertion of a bougie. The finger is the safer method of effecting this object, because the operator has more control over the amount of pressure exerted, and is less apt to cause rupture of the bowel, which unfortunate complication would necessarily be followed by peritonitis and almost certain death of the patient. The only other treatment is the employment of tonics and anodynes, together with the administration of soothing and detergent enemata, in order to render the condition of the patient as comfortable as possible.

TRANSLATIONS.

PSEUDO-MUSCULAR HYPERTROPHY (Dr. Ludwig Schlesinger, *Wiener Med. Presse*).—The first publications relative to this malady appeared in 1838, in Naples, containing the histories of two cases of a peculiar disease of the muscular system, in which there was a diminution of the power of the muscles, accompanied by an increase in their volume.

From time to time narratives of similar cases appeared in the journals; but no one attempted to give any theory relative to the origin of the disease until 1861, when Duchenne called more particular attention to it, and referred it to some cerebral affection. As he had no opportunity of observing the disease, except in children, he suggested the name "*paraplégie hypertrophique de l'enfance de cause cérébrale*" for it. To him belongs the credit of first calling the attention of the medical world to it, and since that time about one hundred cases have been placed on record. In most of these cases, in addition to records of the clinical phenomena observed, microscopic examinations of small pieces of muscular tissue were made, and in some cases records of the post-mortem appearances were kept; but, owing to the striking discrepancies in the results of these observations, up to the present day no unanimity in regard to the exact pathology of this disease has been reached. While some observers, relying upon the conditions noticed at autopsies, being struck by the wide-spread changes both in the peripheral nerve-trunks as well as in the spinal cord itself, support the theory that the origin of the disease is to be found in pathological nerve-changes, others of equal eminence do not countenance this view. The idea of a cerebral origin has been given up by all, even by its originator, Duchenne. A like difference of opinion exists in regard to the condition of the muscles, as to whether the atrophy of the muscular fibres is the first factor in the pathological change, and the growth of the interstitial tissues is consequent upon it, or whether the latter condition should be looked upon as the cause of the former: not long ago, Friedrich, of Heidelberg, published a valuable monograph on "*True and False Muscular Hypertrophy*," in which he endeavored to prove the identity of progressive muscular atrophy with pseudo-hypertrophy, regarding both affections as results of chronic myositis, one being distinguished from the other only by unimportant modifications of the results of a hyperplasia of the interstitial connective tissue.

Upon examining the numerous cases reported under various names, it is found that they, with but few exceptions, present a common type.

In most cases the process begins in the earliest youth. In but few is it found to originate at the time of puberty. There is frequently found a hereditary predisposition, and it but rarely commences in adult life. The children affected are, for the most part, those who have been weak from their birth and have developed slowly. The parents notice that at the age when children are usually

able to walk, they have not even made attempts at progression; and when later, in their fourth or fifth year, they do begin to walk, they fall readily, and their gait is unsteady. Soon there is noticed increase in the volume of some of the muscles, usually first in those of the calf, and this is accompanied by contraction of the tendo Achillis, from which results a drawing-up of the heel. Gradually the muscles of the thigh and loins, sometimes also those of the upper extremities, increase in size, while at the same time other muscles of the trunk or arms become atrophied. The loss of power of the muscles stands in marked contrast to their increase in volume. In a short time curvations of the spine develop, and, as the disease progresses, the power of standing and of locomotion is lost, the patient is no longer able to make the simplest movement, he cannot turn himself in bed; and he remains in this condition until death occurs, either from paralysis of the diaphragm or from some intercurrent pulmonary trouble.

Microscopic examination in most of these cases reveals simple atrophy of the muscular fibres, with an enormous increase of the interstitial, fatty, and connective tissue. In a few of these cases it is found that the muscular fibres have almost entirely vanished, and have been substituted by fatty tissue. The wide-spread degeneration noticed in the nervous system has been previously mentioned. This type of the disease, as related above, has been noticed but rarely in adults,—only four or five times.

Auerbach and Berger, in Breslau, have recently published notes of four cases which are markedly distinguished from the usual type both in their clinical history and in their structural lesions. In all four of these cases the disease was consequent upon an injury, and affected the muscles of but one limb; in one case the muscular tissue of the right arm alone being involved, in the other three that of the left leg. The functional changes were by no means so marked as in the typical cases; in place of a total loss of the power of motion, only a diminution was noticed. The microscope revealed in these cases a true hypertrophy of the muscular fibres, but the excessive growth of the interstitial tissue was wanting.

These two observers seem to look upon these cases as belonging to the category described above, and regard them as cases in which a false hypertrophy may develop through the disappearance of the hypertrophied muscular tissue and the growth of the interstitial tissues.

Schlesinger recently had the opportunity of observing a patient who had been sent to the hospital on account of some mental disease, but in whom he also found some hypertrophy of the muscles of the left side. By a microscopic examination he found the muscular tissues of this man much diseased, and he thinks himself justified in concluding that the disease in this case started in the muscular fibres, and that the interstitial tissues were secondarily involved. Whether the process was simply an inflammatory one of the muscle, or whether there was primarily some alteration of the nervous system, cannot be decided; but he is inclined to the opinion that the disease was a chronic inflammatory process of the muscular substance. The results of his observations lead him to a different conclusion from that maintained by Auerbach. From the circumstances that he failed to find any muscular fibres which were hypertrophied, and that he did find evidences of disease in fibres of normal size, Schlesinger concludes that in the case which came under his notice there was no stage of true hypertrophy. W. A.

DR. J. H. SAUNDERS reports (*Canada Lancet*, March 2) a case of recovery without vomiting in a man who had swallowed an ounce of chloroform.

PHILADELPHIA MEDICAL TIMES.

A WEEKLY JOURNAL OF
MEDICAL AND SURGICAL SCIENCE.

The Philadelphia Medical Times is an independent journal, devoted to no ends or interests whatever but those common to all who cultivate the science of medicine. Its columns are open to all those who wish to express their views on any subject coming within its legitimate sphere.

We invite contributions, reports of cases, notes and queries, medical news, and whatever may tend to increase the value of our pages.

All communications must bear the name of the sender (whether the name is to be published or not), and should be addressed to Editor Philadelphia Medical Times, care of the Publishers.

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SATURDAY, MARCH 21, 1874.

EDITORIAL.

THE ANNUAL OVERFLOW.

NEXT week the profession will be more numerous by some hundreds than it was before the colleges flung open their doors and let the anxious crowds come out. The profession grows in numbers by the annual increment, but does it grow in power? We fear not. As the addition of new links of imperfect workmanship lengthens but weakens a chain, so, it seems to us, does the yearly growth increase but weaken the profession. It appears to be in the first place indisputable that the influence of the profession, so far from growing stronger, really lessens with age. To-day, in circles where formerly the physician was held in high esteem, he is looked upon as a puzzle, a problem, a *lusus naturæ*, a something removed from the common humanity; and in other circles of power regular medicine, quackery, imposture, and ignorance are jumbled into a mass, and the profession is weighed by the general average.

The reasons of the declension of physicians in public esteem are no doubt manifold; but the roots of all these causes seem to us to take life upon Commencement day. In the yearly outpouring of semi-educated men is furnished the leaven that is leavening the whole lump.

We are not of those who believe there are any real differences in the schools. It is in our judgment "six of one and half a dozen of the others." An incident which came under our notice will serve as an illustration of the evil, and is not an

unfair example of the workings of the present system of education. Mr. — was a cooper by trade; he was an excellent workman. Merrily from early dawn to dusky eve he drove the hoops home on the great molasses-hogsheads, or deftly fitted the staves of the whisky-casks. By thrift and toil he prospered and became a master-cooper, and then, by shrewdly making his bargains and industriously working with his men, he acquired sufficient property to render him independent of his week's or month's labor. But times grew dull: molasses-hogsheads were not wanted, whisky-casks were a drug, even flour-barrels were at a discount. One day, as our hero was walking along the streets, pondering with sunken head upon this sad state of affairs, he heard a bell ring, and, looking up, he saw before him a large building, and on inquiring was told that it was a medical college, and that the bell had been rung not for an auction but for lectures. A brilliant idea seized him, thrilled him to the marrow, and almost took his breath. He would become a doctor. Wasn't it better to be Dr. Smith than Cooper Smith among his neighbors? Wasn't it easier to feel pulses than to wield the adze and the mallet? So said, so done. In two years the garments of the cooper were shaken off, the pompous roll of the Latin had awakened its echoes in the cooper's soul, and the robes of medicine had been put on. We do not wish to be misunderstood, or in any way to sneer at honest labor or at small beginnings. A man may rise from the peasant's hut to the sublimest height of intellectual power and deserved fame; but he rises only by steady, persistent efforts,—efforts whose sources are the in-born instincts of his soul, and not the offspring of exoteric circumstances. Our cooper was a cooper still; cooper in intellect, heart, and soul, but doctor in law and doctor by authority. He had earned his degree by attending lectures and paying his fees; by dint of coaching by young physicians who had brought their art to such perfection that they could tell almost to a certainty the questions which would be asked in the green-room,—by dint of such coaching he had been able to resist the pin-scratches officially made to test the candidate's knowledge, and he was by right and by law a doctor. His fitness may be gauged by the fact that shortly after his examination he came in great glee to one of his coaches, stating that some unfortunate wretch suffering from chills had come to him for treatment; that he wanted to give quinine, and would the doctor please write a prescription, that he might copy it?

American practitioners of the better class are

equal, we firmly believe, as practitioners, to any in the world; but many of them acquire their knowledge and skill *after* graduation, and many of them, though skilful practitioners, fail entirely in those public duties by the manner of whose performance the profession is judged: not educated during their student life in hygienic medicine or in medical jurisprudence, and having little call for such knowledge afterwards, too often a judicial investigation or a public discussion of a hygienic problem is simply a public disgrace of the profession. When coroners' physicians in our largest cities make such judicial examinations that their testimony is ruled out of court, when the absence of contention and strife between doctors is the rare exception in court proceedings, how can the public judge otherwise than they do? More than this, owing to our system of manufacturing doctors, great numbers of the ignorant enter the profession; many of them finally to go back to their cooper-shops, some of them to achieve practical success and to build up remunerative practices. We doubt not that some of our readers will remember a doctor of this town who accumulated a competency, although "stumick" was the key-note of the English of his prescriptions. The colleges as at present organized are in very truth the enemies of the profession. The colleges, we say,—not the faculties: we are willing to grant that they do their duties conscientiously.

We know that many of the professors see with the clearness of propinquity the sources of evil and sadly acknowledge the gravity of the trouble. Yet they are powerless to alter or reform: the instruments of an organization, they are responsible only for the method in which they perform their assigned duties. The demand made upon them by some of the profession that they change the system has seemed to us ludicrously unjust, if not absolutely impudent. This may appear strange to some; but, as our columns are crowded, we must leave the development of our reasons for another issue.

CORRESPONDENCE.

THE BIDDENDEN MAIDS.

TO THE EDITOR OF THE PHILADELPHIA MEDICAL TIMES:

THOUGH these ladies may not have figured in the pages of "scientific" journals, they have long been famous in print, as well as in local tradition. I find at least three accounts of them in books on my library shelves: in Chambers's "Book of Days," vol. i. p. 427; in Brande's "Popular Antiquities," vol. i. p. 166; and in Timbs's "Something for Everybody" (Lon-

don, 1861), p. 54. All these authorities quote Hasted's "History of Kent" (published in 1790), in which the story is shown to be a "vulgar tradition," without historical foundation. Hasted says that "the truth seems to be that it [the bequest] was the gift of two maidens of the name of Preston; and that the print of the women on the cakes has only taken place within these fifty years, and was made to represent two widows, as the general objects of a charitable benefaction." In the year 1656 the Rev. W. Horner, rector of the parish, claimed the lands as a part of his glebe, but failed to get them; in the pleadings preserved in the church, the names of the ladies are said not to be known.

It is worth mentioning, by the by, that, according to the tradition, the "maids" were connected both at the shoulders and the hips, having only one pair of arms, but two pairs of legs.

The costume of the figures on the cakes is of the time of Mary: "open bodices, laced, Vandyke ruffs, and sleeves slashed at the shoulders," with the head-dress of that period.

W. J. R.

CAMBRIDGE, MASS., February 23, 1874.

PROCEEDINGS OF SOCIETIES.

MEDICAL SOCIETY OF THE COUNTY OF ALBANY, NEW YORK.

SEMI-MONTHLY MEETING, FEBRUARY 18, 1874.

THE PRESIDENT, DR. JOHN SWINBURNE, in the chair.

A CASE OF NEPHRITIS.

DR. R. H. SABINE reported a case of nephritis. Mrs. V., æt. 29, of tuberculous tendencies, and the mother of five children, being very near the end of her sixth pregnancy, through the course of which she had been unusually well, accidentally struck herself on the knee; she was instantly taken with pains in the abdomen, which soon went to the back; they were continuous, but more severe at times, and she supposed them to be labor-pains.

A grain and a half of opium were given, and chloroform by inhalation, the opium being repeated in two hours. After this the pain took on more the character of that of labor; the os dilated fully in about five hours, and the fœtus, weighing about three pounds, was delivered by forceps. What were supposed to be after-pains were very severe, and opium was given again. Twenty hours after delivery she was found much exhausted. She had passed no water, and on using the catheter the bladder was found empty.

Next day she showed a puffy look about the eyes, a pallor of the face, and symptoms of uræmic poisoning. There was still suppression of urine. Cathartics and diuretics were administered; the former only operating. She finally passed into a condition of stupor, and died at the end of the third day.

Post-mortem.—The bladder was found empty and dry.

The kidneys were inflamed and enlarged, one of them weighing ten ounces. The uterus was contracted, and contained a dark offensive discharge.

The President inquired in how short a time death had been known to occur from congestion of the kidneys and suppression of urine. He had never known it to occur in less than three days. This is interesting in a

medico-legal point of view; a prominent physician had asserted on the witness-stand that a person going to bed at night entirely well may die before morning of uræmic poisoning. When such men make so strong an assertion, the matter ought to be investigated.

Dr. J. L. BABCOCK remarked that this depended on the amount of urea in the circulation. He gave the details of a case in which during four days not more than half a pint of urine was passed, in which the symptoms characterizing congestion of the kidneys were present; under salines and cups with hot fomentations to the back the patient improved and recovered.

Dr. F. C. CURTIS spoke concerning the part taken by the blow on the knee in the etiology of the affection of the kidneys in Dr. Sabine's case. He alluded to a case which he reported to the Society in May last (see *Medical Times*, vol. iii. p. 566), in which a patient in sound health met with a fall, hurting his head and back, followed immediately by symptoms of acute nephritis, resulting in death within three months. Dr. Brown-Séquard had written on this subject of external injuries producing disease of internal organs, by nervous sympathy probably. In many cases this point may be an important one.

Dr. C. D. MOSCHER said it was pertinent to inquire as to the effect of the opium given in this case. It is well always to make sure of the condition of the kidneys in the lying-in state before administering it, although it is generally given very indiscriminately. Opium, as well as chloroform and all anodynes, seems to aggravate an existing disease of the kidneys, and the continued use of anodynes before delivery may often bring it on.

Dr. JOSEPH LEWI remarked that the tuberculous tendency, and in addition the pregnant condition of the patient, as reported by Dr. Sabine, would tend to hasten her death. He had observed in these cases a small quick pulse, a characteristic sweat, and a smell of urine about the patient.

He had never seen bad effects from opiates in either acute or chronic Bright's disease, when given with discretion—*i.e.*, symptomatically—by a careful physician.

Dr. VANDERVEER said that he had given opium in some cases of albuminuria with pleasant results, and in others with the opposite. In one case of chronic albuminuria convulsions came on after the exhibition of opium, and in another he had seen forty drops of laudanum by enema produce coma and death. As to the length of time a patient lives with suppression of urine, he had a patient in May, 1866, of dissipated habits, who was sick three days and recovered; recently he had another attack, which lasted five days, when he died. Although he suffered great pain, but little opium was given.

The President said that a distinction should be made between acute and chronic inflammation of the kidneys. In the former there is no albumen at first in the urine, and in these opium is badly borne; in the latter there is albumen, and in it opium is better borne, but still not well. He had never seen recovery from a very severe attack of acute nephritis.

PUERPERAL INSANITY.

Dr. JOHN B. STONEHOUSE, JR., said that a consideration of puerperal insanity is interesting from the rarity of its occurrence, the absence or obscurity of its prominent symptoms, the difficulty of treatment, the uncertainty and often fearful termination of the disease. According to the strict significance of the term puerperal insanity, these remarks could refer only to those cases which occur during or within a few days or weeks after delivery; but by usage it has come to include instances of mental derangement originating during the periods of utero-gestation, parturition, and lactation. The late Dr.

Skac, in the Morisonian Lectures for 1873, published in the *London Journal of Mental Science* for October, 1873, abandons the term, and divides it into "puerperal insanity," insanity of lactation, and insanity of pregnancy. While the term is decidedly an inappropriate one, it is necessary to treat the cases together, because of the intimate connection of these three physiological stages and the almost inseparable connection of their etiology and pathology.

The most usual division of the subject is according to the periods of pregnancy, labor and its consecutive state, and lactation; another division is ephemeral insanity, melancholia, and mania. The latter classification is faulty, inasmuch as it does not take cognizance of the peculiar circumstances under which the disease is developed, and dependent upon which are the treatment and prognosis. We will then consider insanity and pregnancy, puerperal insanity, and insanity of lactation.

The period of pregnancy is understood to extend from conception to delivery; the period of labor to the end of the second month; the period of lactation from the second month after delivery.

Of the fifteen cases of puerperal insanity on which I found my remarks, thirteen were married women; ten were between the ages of twenty and forty; three were under twenty, and two had passed forty; eight were primipara, four cases occurred during the second pregnancy, one during the third, one the fifth, and one the eighth. The youngest was eighteen, the eldest forty-seven years of age. In four cases there were histories of heredity; the insanity in all cases having occurred on the maternal side. In five cases hereditary neuroses other than insanity were found; and in the remaining six no heredity could be traced. In six cases the patient had suffered from nervous disease previous to the attack, and in one case an attack of chorea ceased as the mental symptoms came on.

Two cases proved fatal: one from dysentery, and the other from maniacal exhaustion; four cases are at present in institutions, and considered incurable; nine recovered. Of the four incurable cases, one is in a condition of dementia, and the others are classed as suffering from chronic mania.

Of the fifteen cases, six occurred during pregnancy, three during labor, and the remaining six during lactation.

Now allow me briefly to detail the cases which appear to me to be representative of the several varieties, course, and termination.

Case I.—H. J. P., æt. 30, second pregnancy; married five years. Patient exhibited symptoms of mental aberration during the fourth month of pregnancy; fears of poverty and death, with perverted appetite,—craving raw meat, etc. Symptoms developed rapidly, and from the fifth month to the time of labor patient continued in a condition of extreme melancholia, without suicidal propensities. During labor, however, she exhibited considerable interest, and immediately took the child to breast, and to the close of lactation showed no other symptoms of mental aberration. The patient has suffered several times from very severe hemiplegia. Parents and collaterals free from any nervous taint, whilst they are decidedly phthisical. This patient entered an institution during the fifth month of her pregnancy, and was discharged one month afterwards.

Case II.—G. S., German, æt. 23; married one year; primipara; during an instrumental delivery she became violently excited, and charged her husband with attempts to murder her by means of the forceps. Tried to choke the physician while applying the bandage. It became necessary to use the camisole, for the safety of the household.

Under medical treatment she quickly recovered her former mental condition, having been deranged and

under restraint about two weeks. She did not nurse her child. Is again pregnant. No heredity could be traced. No nervous affections in her previous history.

Case III.—D. H., æt. 39; married two years; first pregnancy; during utero-gestation patient was suspicious and apparently very religious. Was not considered by her relatives to be in sound mind. Labor not very difficult, nor marked by any special mental symptoms. During lactation, patient complained of headache in frontal region. Anæsthesia—partial—was noticeable for a few days at several periods. Mental symptoms increased in intensity. Several attempts at suicide occurred, and in the fourth week after delivery, by the advice of the family physician, she was removed to an asylum. A year has elapsed, and the patient is in a state of profound dementia. During the past summer she suffered from a severe dysentery, and became extremely debilitated; had bed-sores. Following this was an obstinate constipation, with atony of the bladder.

Late intelligence gives no hope of recovery.

Case IV.—L. F., of German descent, æt. 18; unmarried; first pregnancy; patient was from a wealthy family, eldest of eight children; three have suffered from epilepsy, two died in infancy from convulsions. She was first attacked when ten years of age. Her mother and several other relatives on the mother's side also give histories of nervous heredity, an aunt and a brother having died at an asylum, of epileptic insanity. The patient, being of weak mind and morals, fell an easy prey to a man much her senior. During pregnancy she exhibited no unusual mental symptoms. During labor, however, she became wild and incoherent in her talk. In the course of a week she was dangerous to herself and her attendants, requiring the use of the camisole continually. The fauces became extremely congested and swollen from the violent and constant screaming. Insomnia was almost unmanageable. Only while under the effects of the most powerful soporifics did she rest from her delirium. Forty-five grs. of chloral and one drachm of a saturated tincture of hyoscyamus would scarcely produce rest for half an hour.

Beef-tea, whisky-punch, and medicine were given either by stomach-pump or by enema, according to the excitement of the patient. Hypodermic injections of morphia, even to the extent of one-half grain, produced no effect, although repeated within an hour. On the thirteenth day after labor she died from exhaustion.

Case V.—M. E. P., æt. 27; married; primipara; family strongly nervous during pregnancy; premature labor was threatened twice. Labor was without any special unfavorable symptoms. In the fifth week of lactation she first exhibited signs of mental aberration; refused food; could not be induced to utter a word; fæces and urine were passed apparently without her knowledge. She sat in her chair with her hands upon her knees, her eyes cast upwards, and her mouth open. It became necessary to force alimentation and medication. Extreme insomnia and debility also further complicated the case. Under treatment she became steadily better until the third month of lactation, when she was discharged cured.

A few words as to the etiology of these affections. In Westminster and Queen Charlotte's, two large lying-in hospitals of London, among 5500 women confined, only twenty were attacked with the disease during their residence in these institutions, and in others the proportion has been small. These facts, however, do not show the whole number attacked, as the time spent in lying-in hospitals after delivery is usually very short, and women attacked with insanity during pregnancy are seldom if ever delivered at an institution.

Dr. Gundry, from collected cases, gives 1434 cases of puerperal insanity in 16,109 cases admitted to insane asylums.

Among the causes, hereditary predisposition appears to be the most important. This heredity, not only to insanity but to other nervous diseases, as it is important to remember, occurs generally on the maternal side. Dr. Macdonald reported sixty-six cases, of which seventeen, or about 25 per cent., gave histories of family predisposition. Dr. Gundry reports twenty-two out of fifty-six patients, or about 50 per cent., who were predisposed by heredity. Of my own cases, four were descended from families with undoubted taints of insanity, or about 33 per cent. This gives an aggregate of 137 patients, of whom forty-three were predisposed to insanity.

Constitutions enfeebled by alcoholic or sexual excess, or by organic disease, are predisposed to attacks of puerperal insanity.

Another important, but decidedly difficult, point to observe, is the moral and mental habits and surroundings of the patients; and perhaps it is well to notice here the fact presented especially by the French alienists,—that unmarried women are much more liable to attacks of puerperal insanity than married ones. The sad amount of illegitimacy which is said to have existed in Paris has added greatly to the numbers of the insane during the period under consideration. The injurious effects of painful emotions were so well known in ancient Rome that it was the custom to suspend a crown from the doors of houses where women were in labor, to indicate that such houses were to be held sacred from all intrusion.

It is difficult to estimate the effect of education and culture in this phase of insanity. Statistics on this point are meagre and unsatisfactory, but I think I may safely say that, allowing the manner of living in two cases to be equally conducive to physical health, the better-educated woman is the least liable to puerperal insanity.

Under this head may be classed those cases where the attack is immediately preceded, and evidently caused, by some powerful mental impression; and also many cases which arise during instrumental deliveries. Dr. Marce attributes puerperal insanity to the constitutional disturbance attendant upon pregnancy and the establishment of the lacteal secretion, and to the general shock to the nervous system which is the direct consequence of labor. Dr. Gooch's theory of its dependence upon the peculiar state of the sexual system which occurs after delivery, and Dr. Storer's reflex insanity, are both of similar explanation, and deserve careful attention in deciding the causation of the disease.

Another writer, in *Winslow's Psychological Journal*, gives a very similar explanation. He attributes the origin of the mental aberration "to reaction between a system predisposed to such derangements, and the normal physiological conditions which are found after confinement, just as in constitutions predisposed to tetanus or nervous delirium these will be developed after the slightest accidents or operations." The special influence of the physiological changes undergone by the uterine and nervous system is a very interesting field for study. During pregnancy new functions are assumed, new relations between the nervous centres and the growth and nutrition of the uterus are being formed. The not uncommon advent of diseases of the kidneys, lungs, etc., the change of habits necessitated by the condition of the patient, all culminating in the peculiar and supreme nerve-tension of the stage of labor, followed immediately, it may be, by exhaustive hemorrhage and the drain of lactation, form a chain of causes whose existence renders the escape of a single woman mysterious and providential.

Dr. Marshall Hall claimed for anæmia and exhaustion the principal places in the causation of puerperal insanity. Undoubtedly these conditions enter into

many cases, but the claim of Dr. Hall cannot be substantiated.

Sir James Y. Simpson raised the point of the connection of this disease with albuminuria.

The statistics of observers do not show any proofs of this theory, and in the three cases of my fifteen in which this question was investigated no traces of albumen could be detected.

The symptoms of the three varieties of puerperal insanity do not present any very characteristic points. Melancholia is most frequently the type of the disease in the period of pregnancy; perverted appetite, suspicious fears, and perversions of the moral element are often noticeable.

Dr. Bucknell says, "Every medical man has observed the extraordinary amount of obscenity in thoughts and language which break forth from the most modest and well-nurtured woman under the influence of puerperal mania; and, although it may be courteous and politic to join in the wonder of those around that such impurities could enter such a mind, and while he repudiates Pope's slander that 'every woman is at heart a rake,' he will nevertheless acknowledge that religious and moral principles alone give strength to the female mind, and that, when these are weakened or removed by disease, the subterranean fires become active, and the crater gives forth smoke and flame."

Dr. Marce gives the case of a woman who became hydrophobic soon after conception; she could neither drink nor bear any one else to do so in her hearing, nor could she cross a stream of water.

Of 155 cases collected by J. Batty Tuke, 28 occurred during pregnancy, over 20 per cent. In my cases, 6 occurred during pregnancy.

Of 783 cases reported by Macdonald, Gundry, Marce, and others, only 65 cases occurred during utero-gestation.

Of Dr. Tuke's 158 cases, 73 occurred during the period of labor; of my 15 cases, 3 occurred during the period of labor.

The mental symptoms are generally of the maniacal type, and may be either ephemeral, occurring during the passage of the child from the os uteri or the os externum, or they may come on later and last longer.

In lactation, 54 of Dr. Tuke's cases occurred, and 6 of my own. The melancholic type predominates during this period.

Puerperal insanity is the most favorable for recovery, while the insanity of lactation is least so.

The prognosis is unfavorable when inflammatory conditions accompany or supervene upon the mental state, or when the strength of the patient is diminished by organic disease, exhaustive discharges, and maniacal excitement.

The treatment differs very little from that of other similar cases of non-puerperal insanity. When it is possible, narcotics should be avoided in the treatment of puerperal insanity, according to Sir J. Y. Simpson; warm baths and alcoholic drinks serving to quiet the patient and procure sleep. This is not always possible, and then chloral, bromide of potassium, conium, and opium, may be relied on. A useful combination is a solution of chloral with a saturated tincture of hyoscyamus or chloroform.

The non-appearance of the menses at the normal period should be considered as an indication for medication to the end. Tonics, stimulants, and nutritive articles should be given when called for by the condition of the patient. Blisters and other counter-irritants are often of the greatest service.

TETANUS.—Surgeon Bhawanee Doss records (*Indian Med. Gazette*) a case of tetanus arising from retained placenta, and successfully treated with hydrate of chloral.

GLEANINGS FROM OUR EXCHANGES.

ALTERNATIONS IN THE INTENSITY OF DISEASES (*Popular Science Monthly*, March, 1874; from the French of Alphonse de Candolle).—Medical history proves, on the subject of epidemic and contagious maladies, a marked fatality at the time of their first appearance, followed by slowly decreasing violence from generation to generation. This diminution is not due to an alteration in the nature of the disease, but to the fact that, when an epidemic falls upon a population for the first time, the greater part of the individuals disposed to receive the disease are attacked and die in large numbers. Subsequent births are the offspring of persons who did not contract the disease, or, at the least, who contracted yet survived it; that is to say, of persons better constituted than others to resist the disease. By virtue of the ordinary resemblance of children to their parents or grandparents, the succeeding two or three generations will be less disposed to suffer from the epidemic; there will be a diminution in violence, or a temporary disappearance of the disease. In time this protective influence is exhausted, and a proportion of individuals arises in whom the malady will be severe, and among whom the law of selection will recommence to operate.

In general terms, heredity and selection must produce an alternation of intensity and relief in diseases. That variation must be more marked when the disease in which it takes place is fatal, and especially when it attacks youth.

Curative or preventive means which are sufficient in periods of light visitation lose a portion of their efficacy at the aggravated period.

This rule applies particularly to the use of vaccine as a preventive of smallpox, as is seen in the European population, which, having been slightly exposed to the smallpox after two or three vaccinated generations, found itself approximating to the conditions of a population in which the disease appears for the first time. The attack is not altogether so violent, but the return is evident; and all means of resisting it which would have sufficed fifty years since have become less efficacious.

THE PREVENTIVE TREATMENT OF POST-PARTUM HEMORRHAGE (*The Dublin Journal of Medical Science*, January, 1874).—Dr. A. H. McClintock calls attention to the fundamental principles governing the production of hemorrhage after delivery, viz., the muscular contractility of the womb, the state of circulation at the time of delivery, and the coagulable power of the blood itself. It is especially important to note the premonitory symptoms of the hemorrhage in question. Vascular excitement towards the end of gestation and during labor always forebodes hemorrhage. When the pulse is permanently rapid and jerking towards the end of labor, and whenever after delivery it ranges above 100, there is great risk of flooding. In the progress of labor, particularly in the second stage, the character of the pain affords a very reliable indication as to the probability of hemorrhage, which is likely to occur if the pains, instead of gradually culminating with a strong pain and subsiding, are sharp, quick, and cease suddenly, with long intervals in proportion to the length of the pains.

In adopting prophylactic measures, all that is required to secure the desired quietude of the vascular system is open-air exercise, abstinence from stimulants, and regularity of the bowels. The liquor amnii may be let off early in the second stage by artificial rupture of the membrane, thus rendering the uterine contraction more permanent and enduring by making it more gradual. The most effectual of all resources against post-partum flooding is ergot, which should be given some little time before delivery. Gallic acid and iron,

when the blood is inclined to be non-coagulable, have also been found to be of great service.

CROTON CHLORAL HYDRATE (*The Lancet*, January 31, 1874).—Mr. J. Burney Yeo, after a number of systematic observations, has come to the following conclusions:

1. In croton chloral hydrate we possess a remedy of remarkable efficacy in some cases of neuralgia of the branches of the nervus trigeminus. 2. It has also the power of affording relief in other obstinate forms of muscular rheumatism. 3. It is of use in certain cases of diffused purely rheumatic cases. 4. It has but little effect in purely rheumatic cases. 5. In cases of localized pain and other nervous symptoms which we find in the class of persons we are in the habit of calling hysterical, this drug is of little or no use. 6. Its efficacy in procuring sleep seems very variable in moderate doses. Two grains will produce sleep in some sensitive females, while ten grains will not even cause drowsiness in non-sensitive males. 7. It is very valuable in some forms of irritative and spasmodic cough, and there is scarcely any remedy likely to prove more valuable for the relief of the distressing night-cough of chronic phthisis.

The dose varies from one to ten grains. From two to five grains may be given every hour, or the smaller dose every half-hour, until fifteen grains have been taken. At present it hardly seems safe to go beyond that dose.

The subcutaneous injection of twelve grains in a cat produced, after prolonged unconsciousness, a series of epileptic convulsions and death.

THE STYLOID MUSCLES AND ANÆSTHETICS (*The Boston Medical and Surgical Journal*, February 26, 1874).—Dr. S. W. Copeland gives the following explanation of the irregular and obstructed breathing which so frequently occurs at a certain stage in the administration of anæsthetics, the patient being in the usual sitting or recumbent posture, with the head held back:

The styloid muscles are put on the stretch. The stylo-glossi draw the tongue backwards, the stylo-hyoides draw the os hyoides upwards, and the stylo-pharyngei raise the pharynx and thyroid cartilage upwards, all thus uniting to close the epiglottis. Pulling out the tongue will partially overcome the action of the stylo-glossi, while the other muscles will maintain their action.

If now the head be tilted forward, the styloid muscles are all relaxed, the tongue falls forward in the mouth, and the larynx falls into its proper place, thus leaving the epiglottis free and the glottis unobstructed, and establishing regular respiration through the natural channel of the nose.

TURPENTINE IN PYÆMIA (*The Lancet*, January 31, 1874).—Dr. J. Sinclair Holden relates the case of a workman in whom amputation of the fingers was rendered necessary by an accident. Gangrene supervened, a secondary operation was performed above the wrist, and was in its turn shortly followed by rigors, profuse sweats, sleeplessness, low delirium, subsultus, and stupor, the wound becoming sloughy and offensive. The man rapidly sank, in spite of free stimulation.

As a *dernier ressort*, half-drachm doses of turpentine were administered in egg emulsion every four hours. After the third dose they were discontinued, as the pulse and temperature had fallen and consciousness returned. The patient partook liberally of brandy and beef-tea, but on the following day all the asthenic symptoms reappeared, and the patient relapsed into a comatose condition. The turpentine was again had recourse to, and with the same happy effect. This time the improvement was permanent, and the patient made an excellent recovery.

CEREBRO-SPINAL MENINGITIS (*The Lancet*, January 10, 1874).—At a meeting of the Medical Society of London, Dr. Dowse read a paper on the above subject, and gave the following diagnostic table:

EPIDEMIC CEREBRO-SPINAL MENINGITIS.	SPORADIC OR BASIC CEREBRO-SPINAL MENINGITIS.
Attack sudden, without any special predisposing cause.	Attack commences gradually, and resembles an onset of acute rheumatism.
Apparently of a contagious or infectious origin.	Usually arising from exposure to cold, exhaustion, and privation.
Sensorium affected from the first.	Sensorium never affected until the last stage.
Excito-motor spasms of a tonic character in groups or groupings of muscles, with marked loss of cutaneous and muscular sense.	Incoördination of movement, with cutaneous formication, partial anæsthesia, muscular hyperalgia, but no tetanic spasms.
Reflex movements common.	Reflex movements rare.
Vomiting urgent and uncontrollable.	Vomiting not so severe.
Temperature rarely exceeds 100°.	Temperature often rises to 105°.
Purpuric maculæ diffuse and general.	Maculæ never seen in the desudate form.
Death usually takes place from coma.	Death usually takes place from apnoea.
Prognosis grave.	Prognosis hopeful.
Post-mortem appearances reveal the membranes over the superior cerebral convolutions and posterior columns of the cord as the seats of lesion.	Post-mortem appearances reveal the membranes over the base of the brain and anterior column of the cord as the prime seats of lesion.

MISCELLANY.

GLYCERIN FOR PRESERVING FRUIT.—We learn through a German journal that in order to preserve fresh fruits it is only necessary to heat them, if not perfectly ripe, in water almost to boiling, drain nearly dry, and cover with warm, concentrated glycerin. If the fruit is perfectly ripe, heating in water is unnecessary. It is also advised to pour off the glycerin after standing for some time, and add fresh concentrated glycerin. The glycerin poured off may be concentrated on a water-bath and used a second time. Ordinary glycerin is often impure, but only that which is perfectly pure and colorless, with a clean, sweet taste and a specific gravity of 1.25, should be employed.—*Journal of Applied Chemistry*.

A MEDICAL LICENSE FOR LADIES.—The King and Queen's College of Physicians in Ireland has determined to admit females to the examination for its diploma in Midwifery, which can be registered. The Royal College of Surgeons in England has the power of granting a license in Midwifery, which can be registered. If it would use this power in favor of women passing a fit examination, we might hope for some abatement of the scandal of midwives' midwifery, and see an experiment on a goodly scale of the fitness of women for midwifery practice, which we much question.—*The Lancet*.

PRESERVATION OF FOOD BY GREAT COLD.—M. Bous-singault (*Comptes-Rendus de l'Acad. des Sci.*, January 27) states that a quantity of beef-tea having been submitted, eight years ago, to a temperature of -20° for several hours, has remained in perfect good condition up to the present time. Sugar-cane juice was at the same time subjected to this treatment, and was found to be in excellent condition. Both substances had, of course, been kept in closed vessels.—*Druggist's Circular*.

NOTES AND QUERIES.

HOSPITALS AND MEDICAL PROGRESS.

TO THE EDITOR OF THE PHILADELPHIA MEDICAL TIMES:

It may be that you have correctly indicated "Some of the Uses of Hospitals" in a recent article,* though in disposing so summarily of the part which provincial practitioners can and do play in medical progress it seems to me you have fallen into error. In my time, so far from medical progress emanating from hospitals, it has emanated more from the people than the profession.

The real spur to medical progress, if I have interpreted the signs rightly, is the patronage people bestow on irregulars and patent medicines. This would not be the case were the people satisfied with the ministrations of the regular profession to the sick. Speaking of and for myself, the enormous extent of the traffic in proprietary medicines, and the patronage given to irregulars, have been a spur to me all my professional life to make myself a safer and more trustworthy guide in sickness to-day than I was yesterday. Advancing age, and its consequent experience, have had something to do with my own progress, if I have made any, in my thirty years of professional life. I have had many very useful hints, suggestions, and instruction from others, few of whom were, however, connected with the staffs of great or small hospitals.

Hospitals ought to do the duty through their staffs, you point out; but the truth is, they have not in the past, and are not doing so now. In my time, and so far as I can read history in the past, progress in medicine originates in the study, or rather the studies, of private practitioners. Hospitals have sometimes settled unsettled points of administration. They have settled many points in physiology and morbid anatomy. But, I apprehend, everything which post-mortems, by unassisted vision, can settle, has been settled long since, and now needs no repetition, except for the instruction of novices. Many points in physiology need further investigation with assisted vision, but I believe that, since the publication of the recent elaborate works on histology, the limit of useful discovery is nearly reached in that direction.

The path of real progress in medicine, it seems to me, lies in arranging the accumulated facts in the several departments of medicine in a plan or science of life. Aimless and pointless "experiments" with "drugs and medicines" will contribute little of value to the coming science of life, except to weed out needless therapeutic measures; and this they can do much less perfectly as empirical experiments, than with a well-defined purpose and end, in a science of life.

So far from medical reforms and medical progress originating in and radiating from the staffs of hospitals, they obey the law common to all other progress in knowledge and reforms, and originate on the outer borders, with those who come in contact with their fellow-beings in private life,—the general practitioners.

The educated classes in civilized life have, in many instances, outgrown medical philosophy as it exists to-day. They look for the same definiteness in medicine that they find in other departments of human knowledge. The irregular practitioner and proprietary medicine vendor proffer them this definiteness in their "theories" of disease and cure, and obtain enormous patronages, and accumulate wealth. The number of those who become dissatisfied with regular medicine is always large enough to supply them material upon which to ply their trade.

In medical centres, medical progress, except in limited directions, is effectually barred by medical ethics. Whoever attempts to teach in a medical centre, must teach up to the standard of the text-books. Any departure of moment would forfeit his standing in the profession,—he has violated medical ethics. To teach, he must found a new "school" of medicine. The direction of progress recognized by the ethics of the profession is "observation" and "experimentation." If an attempt is made to deal with the results of observation and experiment by the only other mode by which the boundaries of knowledge are enlarged, viz., abstraction, the ethical fingers of the profession beckon him to desist, or he will lose caste. In truth, the channels of professional education are full, and any material change in any department would mean new men at the front. There are, therefore, many reasons for preserving the *status quo* of the profession in medical centres, not least among which is "Nestor's" admonition not to attempt innovations, or "bread and butter" will be lost. Medicine of to-day is encumbered with a nomenclature and ideals which cannot be carried forward into a science of life. Much of its nomenclature is hoary with age, some of it blended intimately with superstition or tradition, and cannot now be used to designate or represent exactness. Definitions of many of the terms have been modified from time to time, to correspond with the changed and changing knowledge or "views" of the things or processes they are intended to represent, until their original sig-

nificance has been lost. This applies to written definitions. Despite this, the old significance is the prominent thing carried forward, orally and mentally. Inflammation and tubercle are instances of these attempted modifications of meaning.

There are, however, some significant signs from influential quarters, looking towards the employment of "logical" methods of investigating life-phenomena. Thus, Prof. Flint,† under the cover of discussing "the contagiousness and non-contagiousness of disease," presents a plea for the use of "logical" methods of dealing with certain "accumulated facts" of life; that is, "abstraction." True, portions of his paper would not bear the touch of logic, for he speaks of "disease" in the old sense, as something tangible, real, and distinct from the living body. And that is the conception of ninety-nine hundredths of the people, and probably the profession, including irregulars. But it is, perhaps, needful to mingle the old and new in this confusion, to obtain a hearing.

This mania, if I may so speak, for experimentation and observation, on the part of the profession, reminds me of a patient to whom I was administering chloroform some years since. Her breathing and pulse gave me timely warning of danger, yet, whenever consciousness returned, she would call out lustily for "more chloroform." So it is with the profession; though overwhelmed with facts, the cry is still, "Give us more facts." It is pleasant to know that what is wanting is not new facts, but the arrangement and classification of those already made out, in the frame-work of a science of life. I say frame-work: for a complete science of life, whose chief factors are motion of matter, or motion by matter, will never be attained. A thing complete would be only a system, like homœopathy, hydropathy, etc., etc.

The lines to guide future investigation, whether by experimentation, observation, or abstraction, are laid down definitely and sharply in the brief introduction to an authority second to none in the profession.‡ And, to my mind, there are now no essential facts wanting to construct a science of life, with places for all the new facts which present and future investigation will continually bring to light. The adoption of such a scheme will, or should, limit unnecessary observation and experimentation. For, when a point is once demonstrated, that ought to put an end to investigation concerning it.

The missing link needful to connect in harmony all the results of past investigation, is the function I have assigned to the lymphatic system.§ Its use, or physiological function, was arrived at by induction,—abstraction,—and bears the severest tests of the "logical" methods of Prof. Flint in dealing with the problem. It seems to me past "hospital reports" may, without injustice, be placed with the volumes you so recently pronounced as ranking *zero in worthlessness*, for each contains some valuable matter.

"Hospital Reports," if got up with reference to the lines of investigation laid down by Rindfleisch, may be placed alongside of that which you designated *acme of excellence*. In the educated popular mind, the profession—regular profession—has but an equivocal standing. Witness the onslaught on it, on a recent occasion, by certain influential secular and religious journals in the cities of New York and Cincinnati. Medical literature was branded by the *Cincinnati Gazette* as "medical balderdash;" while equality in public practice was claimed for homœopathy in New York and Brooklyn, on the score of equal fitness for the service.

These now at best lukewarm friends will become warm friends when the logical test is applied by the profession in dealing with the facts of life,—not before.

Z. COLLINS McELROY.

ZANESVILLE, OHIO, February 16, 1874.

PHILADELPHIA COUNTY MEDICAL SOCIETY.

A CONVERSATIONAL meeting will be held March 25, 1874, at 8 o'clock P.M., at the hall of the College of Physicians. Dr. William Pepper will read a paper on the "Diagnosis and Treatment of Pleural Effusions." All regular practitioners of medicine are invited.

OFFICIAL LIST

OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U.S. ARMY, FROM MARCH 10, 1874, TO MARCH 16, 1874, INCLUSIVE.

RANDOLPH, JOHN F., SURGEON.—Relieved from duty with Sioux Expedition. S. O. 35, Department of the Platte, March 11, 1874.

BILL, J. H., SURGEON.—Granted leave of absence for thirty days. S. O. 55, Military Division of the Atlantic, March 12, 1874.

O'REILLY, ROBERT M., ASSISTANT-SURGEON.—Assigned to duty with Sioux Expedition. S. O. 35, c. s., Department of the Platte.

† New York Medical Journal, February, 1874.

‡ Rindfleisch, Pathological Histology, New Syd. Soc., 1872.

§ Philadelphia Medical Times, January 31, 1874.

* Philadelphia Medical Times, February 7, 1874.

SATURDAY, MARCH 28, 1874.

ORIGINAL COMMUNICATIONS.

THE SUPPLY OF NERVES TO THE SKIN.

BY S. WEIR MITCHELL, M.D.

I PUBLISHED in the *Times* of December 6, 1873, a brief sketch of my opinion in regard to neurotomy, and as to certain questions which are related to nerve-sections. The views of this paper were criticised by Dr. H. C. Chapman, in the *Times* for January 24, 1874, and grave fault was found with my anatomical facts. Had my knowledge of anatomy been the only point concerned, I should have made no reply; but if Dr. Chapman's confident defence of the Anatomies be accepted, it will lead to the belief that we possess, in ample amount, a certain kind of knowledge which, in reality, we have not, and this I regard as of moment, and as making an answer necessary.

In the paper above mentioned, I stated that surface-nerve anatomy, as taught in the books,*—and I except none that are known to me,—is a fiction. If I had said there is, as yet, no definite and precise surface-anatomy, it would have been a more sweeping statement, and yet would have been correct. Dr. Chapman thinks mine an extraordinary assertion, and “will try to show that, so far from surface-anatomy being a fiction, not only in its general features but in detail it has been made out correctly for years.” Then follows a long and clearly-written account of the general distribution of nerve-branches in the fingers.

Nothing beyond a careful reading of this could be needed, by a thoughtful reader of my own paper, to prove from what different points of view Dr. Chapman and I are looking at the subject of surface-nerve anatomy. He is content with a description which tells us that this nerve-filament supplies the *side* of this finger and these anastomosing filaments feed adjacent *borders* of these two fingers, or the *ends* of such-and-such fingers are supplied by branches of median and ulnar nerves, etc. In Dr. Chapman's surface-nerve anatomy it is rather curious that the word *skin* is not once used, nor is any analogue employed. The nerves feed the *ends* and the *sides* of fingers, etc. Now, this is not *surface*-nerve anatomy as I wish to see it made out, nor could any one dream from his drawing that the skin-distribution is other than symmetrical, nor from his description, written with intent to show how well surface-nerve supply is understood, could it be suspected what precise areas of skin are supplied by certain nerves, or even that the skin is supplied at all. It is, nevertheless, pretty sure that as a rule each nerve supplies largely certain rather definite skin-spaces, that it supplies with far fewer filaments other cutaneous areas, while to some it sends so few fibrils as to be in such regions of trifling functional moment. It is not enough to say, for exam-

ple, that the median supplies branches to the “tip,” “to the back,” “to the parts beneath the nail of the index-finger.” How much of the back of the finger does each nerve innervate? In what proportion do any two nerves concerned feed the same skin-spaces? In other words, if we cut the median, where will pain and touch be lost, and to what amount will they suffer in the various regions fed? Surely, if true surface-neural anatomy be known, there is no need to ask an answer of the clinic and the laboratory. Certainly no anatomical description traces for me the exact skin-spaces in which each digital nerve terminates. The drawings in the books like Dr. Chapman's, or properly, I suppose, my friend Leidy's, mislead us into a notion of symmetrical distribution of the nerve-endings in the skin which does not hold good; and diagrams such as exist in Flower and Henle still further bewilder, and are scarcely more than an approach to the truth. The fact that more than one nerve may be concerned in feeding each portion of skin makes the question of greater moment. If, at certain parts of the skin of the end of the dorsum indicis, an injury exists which it becomes desirable to quarantine by a nerve-section, it is, of course, well to know which of two nerves to cut first, as we might not wish to cut both at once. The exact limit of distribution, the proportional feeding of skin at this part by each nerve, would here be a thing of importance to know; and this no anatomy gives, for this would be surface-nerve anatomy, which is as yet in its infancy. Or, should I seek to learn just how much of the skin of the face will lose the sense of pain and touch after section of the infra-orbital nerve, no anatomy shows this. I ought to add that my own nerve-sections give the spaces in question, and that on the back of the index-finger and of the medius, as I shall elsewhere show, the region of lost pain and touch after section of the median is such as no one could define from any anatomical description or drawing to be found in the books. This brings me to say a few words as to another fact. I said in my paper that the median nerve sometimes *innervates* the thumb, index-finger, and half of the medius, sometimes reaches the whole of the medius, and very often extends over half of the annular. Dr. Chapman is in part right when he blames this statement; but it is a good illustration of the need for a knowledge of proportion in nerve-supply. The facts are valuable, and I shall give them briefly. It will be noted that I say the median innervates; and I said it for this reason, that the subcutaneous nerve-supply seems sometimes to be anatomically large, when really it supplies but little function to the skin,—does, in fact, hardly innervate it. Thus, in France, Létievant has given cases of median section in which the loss of palmar feeling is said to have extended in one to the middle of the median finger, in another to the line between it and the annular, in a third to the middle of the annular. I have seen two median nerve-sections; in both the sense of pain and touch were wholly lost in the face of the thumb, face of the index, and of half of the medius. One I examined no further;

* As Gray, Wilson, Sharpey and Quain, Hyrtl, Leidy, Luschka, Henle, Rüdinger, Hirschfeld and Léveillé, Cruveilhier, Sappey.

the other has full sense of the position of a touch and of the lightest contact beyond this line. Tested by the compass-points there is, however, lessened feeling in the palmar aspect of all the fingers save the little finger, even in the ulnar half of the annular, which is beyond the region usually given to any median supply. In other words, the median supply of innervation was ample in the thumb, index, and half of the medius, but beyond that only capable of measurement by delicate instruments.

Whether these facts be due to variations or to a greater difference in the proportional distributions than seems to show in the books, I cannot yet say. They explain, however, those statements of my last paper with which fault has been found. In a special case mentioned, Dr. Chapman asks further why I should have been astonished at the fact that after section of the radial nerve touch seemed to be nowhere lost. Somehow, this is an astonishment which still clings to me, because in two other cases of radial section, of which I have notes, there was considerable loss of touch-sense, and even, in a quite limited area, of pain-sense. Also, this is what Létievant found in his sections. Therefore, in one case which seems to have been well observed, a cut radial left the dorsal hand-surface in full function. In others the loss of pain and tact existed in a small space on the radial side of the dorsum, while elsewhere, over nearly all of the back of the hand and fingers, touch was lessened. There was, therefore, I think, some cause in my case for my being astonished. Dr. Chapman's reason for feeling no amazement at the continuance of full touch-sense in the dorsum of the hand and fingers arises, as he tells us, from the fact that, supposing the radial were cut, the back of the hand would still be supplied by branches of the "*external and internal cutaneous, dorsalis ulnaris, and the interosseous* nerves." The radial nerve, however, according to every writer, supplies largely the skin of the back of the hand, and it does, therefore, seem strange, unless he attributes the fact to something unusual, that Dr. Chapman should suppose its loss would give rise to no defect of sensation. It will be remembered that in quoting my case I was alluding to the possible occurrence of variations in nerve-supply.

The doctor mentions the interosseous nerve as aiding to make up any lack of feeling in the skin of the dorsum of the hand due to loss of the radial nerve. Of course he refers only to the posterior interosseous; but no authority describes this nerve as affording *any* such skin-supply. It feeds only the wrist-joint,—possibly, according to Knox, some areolar tissue, while Rudinger and others trace fine filaments to the metacarpo-phalangeal joints of the fingers. Unless Dr. Chapman has made new dissections which trace it elsewhere, this nerve must be left out of the case. It is a matter of small moment; but, having been read a lesson on anatomy, it is pleasant to be able in turn to afford some instruction to so able and minute a critic.

Again, I said that after section of all the cords of the plexus save the external, the palm and dorsal surface of the hand, fore-arm and arm, and the inner face of the arm, retained tactile feeling. I

said that this surprised me. My critical friend does not see why, "because," he says, "the external cord forms part of the median and the external cutaneous, the very nerves supplying the parts which retained the touch-sense." "Indeed," he adds, "I should have been surprised had it been otherwise." Therefore, according to Dr. Chapman, the external cutaneous and a part of the median ought to be enough, without the ulnar,* radial, part of the median, musculo-spiral, internal cutaneous, and lesser internal cutaneous nerves, to give such touch-sense in the parts named as to cause no surprise to a reasonably trained observer. Of course, for the fact in question there is some explanation, but it singularly impressed me and others at the time; and not so much because of there being some touch, but because the man gave the locality of the touch alertly, and seemed to feel so very light an impact.

I must be pardoned yet one reply. I stated, in a guarded mode, that cold, pressure, or galvanism may help us, in cases of doubt, to discover the presence of variations of nerve-supply. It would have been difficult to state in a more careful way the merely possible value of a proposed new means of inquiry. Dr. Chapman, however, thinks that any result based on such a mode of experimentation would be very unreliable, because of the free anastomoses of nerves. What Dr. Chapman means by the anastomoses of nerves he does not say. If he means merely the constant gross interchange of fibres which is so common, his criticism is valueless, because such anastomoses are purely anatomical, and so a paralyzing impression made, for example, on the ulnar nerve at the elbow will simply affect the definite peripheral area supplied by the nerve-fibres present in this nerve at the elbow. There is, as yet, no certainty as to the existence of true nervous anastomoses in the extremities; that is, of nerve-tubules directly communicating and transmitting impressions from nerve to nerve; nor, if we had the knowledge of such anastomoses, would we be as yet justified in assuming for them an exact physiological value. The chiasms of the laryngeal nerves in some animals seem to have no physiological uses, and the nerve-filaments which cross the median line of the body in the frog appear to possess power to transmit impressions; and so the most intimate terminal relations of nerve-filaments do not in our present state of knowledge permit us to feel sure that they are the means of carrying impressions from the territory of one nerve into that of another. I am unable, therefore, to see what was meant by this criticism.

Then I am told that the pain which attends such experiments vitiates them, because it is an abnormal condition; but pain, in its milder forms at least, a

* The external cord of the plexus gives off the musculo-cutaneous nerve, and about one-half of the median; whether or not it helps to make up the ulnar, must probably remain undecided during life in any individual. In Cruveilhier and in Hirschfeld and Léveillé the diagrams represent the ulnar as receiving a branch from the external cord; but, although Leidy so describes it, neither of the other two anatomists recognizes this origin in its text, which seems strange enough. Henle recognizes the origin from the external cord as sometimes found. A recent study in this city of the variations of the plexus in thirty subjects, by Mr. Walsh, student of medicine, resulted in finding no one instance of partial origin of the ulnar from the external cord. Mr. Walsh has kindly put in my hands a résumé of his results; but, as he will publish the full study of over one hundred cases, I refrain from further quotation.

physiologist should know, is hardly to be called abnormal,—is, in truth, as distinctly a function as is touch; but in fact I said of my three proposed methods that one of them—freezing—was “very painful;” that pressure, the second, “was not painless;” and as to the third, electricity, I spoke of currents of “moderate intensity,” of “mild currents;” and where is this pain, which is supposed to vitiate a method which the critic seems never to have tested, and which, whether good or worthless, is certainly not open to his forms of objection?

One word to close. The anatomies teach thoroughly sub-surface nerve-distribution. No anatomy gives the true areas of nerve-supply to the skin; not one gives the proportions of this supply.

At the best we are told that the skin of the end of the dorsum of a finger is fed by this nerve or that, the skin of the face of this finger by one nerve, that of its side by another. No book delineates the limits of distribution, and whatever attempts have been made in the anatomies to describe the true surface-supplies are shown to be false by clinical experience. This cutaneous-nerve anatomy is to be made anew, and we want to see in the books tinted maps giving the limits and proportional distribution of nerves to the skin. With novel methods and a fuller knowledge of what is known and what is not, but especially with the help of clinical nerve-sections, we shall soon come to understand correctly how much of the skin each great nerve supplies, and, on the other hand, how much of each nerve goes to effect this object in particular areas of skin. Accurate nerve-supply to the skin, and its proportions—this is what we want. Until we get our knowledge, I shall still be forced to believe that our present surface-nerve anatomy is a fiction.

DISLOCATIONS OF THE HIP—SCIATIC VARIETY.

BY OSCAR H. ALLIS, MD.,

One of the Surgeons to the Presbyterian Hospital.

SIR ASTLEY COOPER considered sciatic dislocations the most difficult to detect, and Syme has unwittingly confirmed this opinion, by once failing to recognize the injury and leaving it unrestored for fourteen days. If further evidence is required of the difficulty of diagnosis, I will refer to the following cases, two of which passed beyond the power of remedy before the true nature of the injury was detected.

Case I.—J. K., æt. 61, was brought into the Presbyterian Hospital in July, 1873. History of the case: During the night of the Friday preceding his admission he walked in his sleep from the second-story window. In his descent he struck a clothes-line, which broke, and in a measure changed the direction of his fall; but as the accident occurred in the night, and during sleep, it was impossible to gain fuller particulars.

I first saw him lying on his bed; the right thigh was flexed on the pelvis, and stood awkwardly off from the body. On assisting him to assume the erect posture, I noticed that the toe of the right foot could with difficulty be brought to the floor; that the heel was drawn

up; that the ham-string tendons were rigid and prominent; that the leg was flexed on the thigh, and the thigh on the pelvis; that the knee was turned inward towards its fellow; that the gluteal region was flattened and apparently widened; that the spinal column was arched forward in its lumbar region, and that the trunk and extremity had assumed an awkward, constrained, and helpless position.

Upon the administration of ether the limb was brought down by its fellow, and a shortening of half an inch observed.

The reduction was accomplished in the following manner: The man was placed on the floor; then an assistant held the pelvis, while two others, by means of a fillet placed above the knee,—the force being exerted at right angles to the plane of the body,—lifted the head of the bone to a level with the acetabulum. This being done, I was enabled, by grasping the ankle with one hand and the knee with the other, to convey the dislocated bone into its proper place, though with a scarcely audible sound.

There was some difficulty experienced in dislodging the bone from its new position, and the instant it took place crepitus was distinctly recognized by all present.

The patient, after reduction, was placed in bed with the usual restraints; but, as lying in bed was irksome to him, he arose from it in about a week, and, experiencing no difficulty in walking, did not return to it by day, and was soon discharged at his request from the hospital.

Case II.—Mrs. G., æt. 64. Fell on going into the yard down a flight of six steps. She thinks she received the force of the fall in the middle of the thigh posteriorly.

As she was rendered helpless by the fall, the family physician was sent for, *who, on learning the nature of the accident, and fearing, from the age of the patient, a fracture, administered ether, gave her a careful examination, and, as neither deformity, crepitus, nor restricted motion was present, left, satisfied that it was only a contusion.*

Five months later—the patient in the mean time being helpless on account of the great suffering in the part—I saw the case. There were present the following symptoms: Shortening of about half an inch; the limb lay parallel with its fellow, with the toes looking upward; the limb, especially below the knee, was œdematous. The knee was stiff (false ankylosis). The gluteal region was flattened and apparently widened. The gluteo-femoral creases of the two limbs did not correspond as they do in the normal condition, and the great trochanter could be distinctly felt in its new position. There was great pain in the limb, constant, and aggravated by changes in the weather, and referred to a point in the course of the great sacro-sciatic nerve, about six inches above the popliteal space, and due, probably, to the head of the bone resting on and compressing the nerve at its exit from the pelvis.

The patient was again brought under the influence of ether, as every motion of the limb was painful, and the diagnosis of sciatic dislocation was established. There seemed to have been no adhesions, or at least no difficulty in breaking them up, and during manipulation and traction the head was distinctly recognized to jump suddenly from its new bed. This feeling we all experienced two or three times under the repeated efforts* made to restore it, but our exertions were fruitless.

Case III.—Mrs. R., æt. 57, fell to the sidewalk on a slippery evening in February, 1872. She fell upon her left thigh, but by some means the injury sustained was in the right. As she was unable to rise, two policemen

* Our efforts were with a view to dislodge the head of the bone and form a new home for it if it could not be restored. We failed in both.

came to her assistance, and one of them stooping to help her fell across her outstretched right limb, and it is more than likely that to the second accident is her present condition traceable.

On being conveyed to a friend's, a physician was summoned, who examined her *lying on a feather bed*, and with *all her clothing on*, and pronounced "no bones broken." Not satisfied with his opinion, another physician was summoned the following day, who, after a careful examination, said that the injury would not "signify," and clapped on a large fly-blister!!

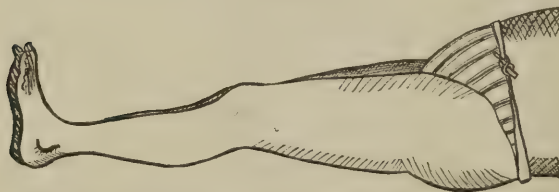
I will not repeat the needless, superadded suffering of the poor woman from a mistaken diagnosis.

As soon as the limb had recovered from the shock—*i.e.*, within a few days—she had rotation, and found the easiest position for it to be *semi-flexion*. She sat up in a few weeks, and left her bed in four; though from the receipt of the injury to the present time she has been unable to walk without crutches. Pain has been a constant, persistent feature from the first.

Present condition (the patient standing before me).—There is marked flattening of the gluteal region. The spinal column is *not* unusually arched forward. The limb has a natural, easy position, with three-fourths of an inch shortening. She can place the foot as flatly on the floor as she ever could, and can stamp and kick out with it with considerable force. The measurement around the pelvis on a level with the pubes shows that the injured hip is less prominent by one inch and a half. The head of the bone has not formed adhesions in its new home, and can be moved as freely as the sound one. The great trochanter is one inch farther from the *pubic symphysis* than its fellow; and a resort to the following device establishes the nature of the injury.

In the cases above described will be found the symptoms that characterize *recent* or *chronic* sciatic dislocations: hence a summary of them will not be given. To arrive at a correct diagnosis in all severe injuries of the hip is a matter of the greatest importance, and to aid in this I would suggest the following simple but effective plan.

FIG. 1.



POSITION IN WHICH TO TAKE THE FIRST MEASUREMENT.

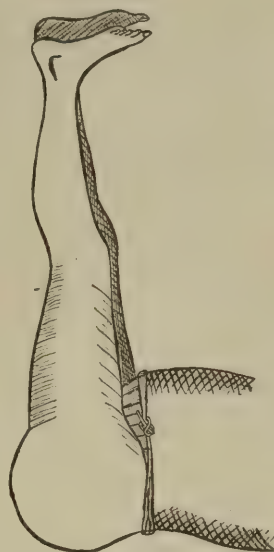
Place the person on a hard mattress, or, *better*, the floor, and notice the amount of shortening, if any, with the limbs in a line with the body. If it be sciatic dislocation it will not exceed three-fourths of an inch; there may be none.

Next compare the limbs at right angles to the trunk (Fig. 2), and if it be a sciatic dislocation there will be a difference of at least *one inch and a half*; but if the measurements in both positions are the same, there cannot by any possibility be a sciatic dislocation.

To understand the philosophy of this plan it may be of importance to examine a pelvis (Fig. 3), placing it in the position of a person lying on his back. The great sacro-sciatic notch now lies *an inch and a half* almost directly below the acetabulum, so that it is quite possible (Case II.) for the head to lie in it,

especially immediately after dislocation, and exhibit no shortening by the usual mode of measurement.

FIG. 2.

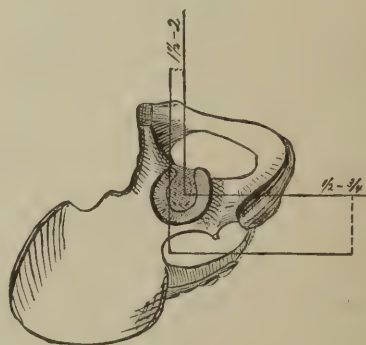


POSITION IN WHICH TO TAKE THE SECOND MEASUREMENT.

But the instant the femurs are compared at right angles to the plane of the trunk,—as indicated by the perpendicular lines,—a marked difference is at once effected.

Now, there is a principle involved in this of great practical importance. It bears upon every variety of obscure injury at the hip, whether it be dislocation, impacted fracture, or severe contusion. The principle is this. While the heads of the femurs lie in their respective acetabula, corresponding measurements in every position will not vary. If one thigh is half an inch shorter than its fellow (as may be possible in impacted fracture) the same difference will persist in flexion, extension, abduction, or adduction.

FIG. 3.



But not so in dislocation. Here the head of the bone is fixed at a point that does not correspond to the acetabulum, and in every new position in which the limbs may be compared a different result may be expected.

A correct diagnosis in injuries of the hip is of the utmost importance to all concerned. Simple injuries, as a fall upon the great trochanter, are often most disastrous, and are frequently followed by years of suffering and helplessness; and it is certainly the part of prudence, not to mention humanity, to make repeated careful examinations and under the most favorable circumstances, and thus, before it is too late, rectify any mistake that must otherwise be followed by a lifetime of suffering.

To Drs. Truman and Yocum, and Mr. Charles Neill, I am indebted for valuable assistance in the first case recorded.

DESCRIPTION OF SPECIMENS FROM DR. LEVIST'S CASE OF ANEURISM OF THE SUBCLAVIAN ARTERY TREATED BY THE INTRODUCTION OF HORSE-HAIRS.

BY MORRIS LONGSTRETH, M.D.,

Curator to Pennsylvania Hospital Museum.

Read before the Pathological Society of Philadelphia.

JAMES M., æt. 47, was admitted to the Pennsylvania Hospital with a large aneurism of the right subclavian artery. It had been recognized only three weeks previously, although he had had pain in the right chest and arm for nine months. A pulsating tumor with distinct aneurismal thrill was seen jutting above the clavicle, and below that bone another swelling was felt, in which the thrill was almost absent. Horse-hair was introduced through a fine needle canula; no difficulty was experienced in its introduction, and twenty-four feet nine inches of it were safely stowed away in the aneurism. The tumor became hard, and pulsation in it and in the radial ceased. No local irritation occurred in or about the swelling after the operation, nor any inconvenience from the arrest of the circulation.

The patient died November 16, 1873, with symptoms of engorgement and pressure on the upper lobe of the right lung. The expectorated mucus was darkly colored with blood.

The autopsy was made some hours after death. There was some œdema of the axillary and pectoral regions, as well as of the right arm.

On the removal of the pectoral muscle, the whole region around into the axilla and under the scapula was fluctuating.

On opening the thorax, the upper lobe of the right lung was found solid, of a dark-red color, and pressing close up to the mediastinum. The margins of this lobe, however, were still crepitant and of their normal color.

The lower lobe was collapsed.

The right pleural cavity contained a small amount of blood-stained serum, but there were no evidences of inflammation.

The aneurism commenced in the second portion of the subclavian artery, at an inch and three-quarters from the bifurcation of the innominate. The wall of the vessel had given way upwards and downwards.

The upper dilatation was about an inch and a half in diameter, and reached above the clavicle, partially covered by the fibres of the scalenus anticus muscle. It contained a dense white clot.

The opening on the lower wall of the vessel was oval-shaped, about an inch in its greater diameter. The margins of this opening were smooth and quite regular.

On dividing the upper lobe of the right lung, there was found a mass of black clotted blood behind it and extending beyond the line of the ribs, especially in the axillary region immediately below the clavicle, nearly two inches. In the upper portion of this soft clot a dense white clot was found attached around the lower aneurismal opening in the subclavian.

In the posterior part of the fibrinous clot were found the horse-hairs.

The lung appeared to have been pressed forward and inward by the increasing mass of blood behind it. Its vessels and the bronchial tubes had been occluded by its condensation. The lung-tissue in contact with the clotted blood resembled the condition of a lung in hydrothorax.

It was found that the first and second ribs had almost entirely disappeared; from the third to the fifth the ribs had been stripped of their periosteum; on the inner surface of the sixth rib the process of stripping was seen going on, the pleura and periosteum were slit for

about an inch, and the blood had forced its way underneath them and almost surrounded the bone for this distance. The third, fourth, and fifth ribs maintained their normal position, but the blood extended through the costal interspaces, so that the clot in the thorax communicated with the fluctuating mass found beneath the pectoral muscles. Hence it will be seen that the fluctuating tumor in the axilla was covered with the dense fibrous tissues of the pleura, intercostal muscles, and costal periosteum, which had been pressed outward by the blood accumulating in the thoracic cavity. The intercostal vessels were found lacerated.

An experiment was made to determine whether or not the blood-current in the subclavian communicated with the black clot found in the thoracic cavity, but it was found that water poured into the aneurismal dilatation of the vessel was perfectly retained, none escaping into the thoracic cavity. On very careful dissection, this fact was proved, for it was found that the mass of fibrinous clot in the dilatation varied from a half-inch to two inches in thickness on the circumference.

Diligent search was made for coats of the dilated vessels, but it was impossible to trace them beyond half an inch from the margin of the opening. The cavity in the fibrinous clot was about two inches and a half in diameter, extending downwards and outwards from the opening in the vessel, having the horse-hairs imbedded in its posterior walls. In the fresh condition this cavity was filled with a recent black clot, mingled with a little white fibrin connected with the fibrinous clot in the dilatation above the clavicle, but not attached to the fibrinous wall of the lower dilatation.

The clot in the dilatation above the clavicle extended across the calibre of the vessel, and prevented the flow of blood into the axillary vessel.

It should have been mentioned that the upper lobe of the lung was attached to the thoracic wall at the level of the seventh rib from the spine around to the sternum. In the thoracic aorta, atheromatous disease was very marked; the calibre of that vessel was irregularly dilated, and in parts the coats were quite thin. The other arteries, with the exception of the innominate and right subclavian, were normal. The cords of the brachial plexus of nerves were intimately connected with the upper portions of the tumor, and were pressed against the under-surface of the clavicle.

The subclavian vein was found stretched over the upper dilatation, and its calibre was so encroached upon that the return-blood was markedly obstructed.

The other organs were entirely normal.

Remarks.—The aneurism commenced in the second portion of the subclavian, and reached slightly into the third portion of the vessel. (This statement is made approximately, as the guiding-mark, the first rib, had disappeared.) The dilatation of the vessel was not uniform; the upper and the lower walls alone seem to have participated in the bulging.

The lower dilatation descended into the thorax, eroded the first and second ribs, and depressed the apex of the lung, becoming a *diffused* aneurism, after the manner described by Erichsen.

At the operation, therefore, it is probable that the aneurism had no true sac, but was bounded by the lung-tissue, pressed downwards from its normal position and condensed, and by the muscular tissues around the apex of the thoracic cavity.

The horse-hairs were thrust into this cavity, and their effect was good, resulting in a marked decrease of the pulsation and thrill felt below the clavicle,

although there was no decrease of the pulsation in the tumor above the clavicle.

It was not until the third day after the operation that the clot began to interfere markedly with the circulation, sufficiently to interrupt the radial pulse. After this day the tumor above the clavicle began to harden, through the extension of the clot from below upwards, and this coagulum barred quite completely the passage of the blood into the axillary vessel, but did not absolutely prevent its entrance, for it is recorded in the notes that the recumbent position slightly restored the radial pulse. Simultaneously with the hardening of the tumor above the clavicle, the return of venous blood from the arm was interfered with by pressure on the subclavian vein, which, at the autopsy, was found stretching over the anterior face of the upper dilatation.

Now, the formation of this clot, which only partially obstructed the vessel, and which from the position of the upper dilatation was connected with the clot in the lower opening only at its distal portion, directed the full force of the blood-current into the proximal portion of the lower opening against the new-formed clot, which, from its position, had no connection with the clot in the upper dilatation. The effect of this strong blood-current was to hollow out a new cavity in the site of the former aneurism. Inspection of the walls of the cavity shows this result very clearly, for on its walls are found a loop and two ends of hair protruding into the newly-formed cavity.

The formation of the clot in the lower sac was producing a cure of the aneurism, similar to results seen in the natural cures of sacculated aneurism, by the deposit of laminated clot in the sac, leaving a passage for the blood through the vessel behind it. If the sac had been well supported by firm tissue, and not, as was the case, been allowed to descend farther into the thoracic cavity by the receding lung, all might have been well, and a cure resulted.

It has been shown that there was no communication between the sac of the aneurism and the mass of dark clot found in the thoracic cavity. Whence, then, came this blood, and what force was it that compressed the lung and stripped the ribs of their covering, and pressed out the tissues in the axilla? The first cause that acted to compress the lung and denude the ribs was the sac of the aneurism; and this pressure must certainly have caused an adhesion to take place between the two pleural surfaces, and when the new cavity was formed in the laminated clot it again began to press down in the thoracic cavity, tearing apart the lung and pleura, stripping the ribs of their covering, and compressing the lung. The process of tearing the pleura lacerated the intercostal vessels, as they were found lacerated at the autopsy, thus supplying a source for hemorrhage,—hemorrhage that was not likely to cease, hemorrhage that was likely to be very gradual, but still of an increasing character, as each rib and its intercostal artery suffered in succession as they were found to have suffered. No hemorrhage from a ruptured aneurismal sac or from a lacerated lung would have been so slow in its progress, nor would

the force of an increasing accumulation of blood from either of these sources have been applied in such a manner as to push outwards the periosteum of the ribs and their intercostal muscles. The force must have proceeded from the line of ribs, and worked in both directions, compressing the lung one way, and pushing the tissues of the costal wall in the other direction.

The notes of the case show that the accumulation in the thoracic cavity was very gradual, that there was no rupture of the aneurismal sac and consequent sudden depression of the circulation, and that there was no sudden laceration of the lung with its attendant copious hæmoptysis.

The symptoms show a gradual compression of the lung, and that when the upper dilatation of the vessel hardened, and the clot obstructed completely the flow of blood into the axillary artery, an increasing fulness in the axillary and subclavicular region showed that the laminated clot in the aneurism was being forced downwards, and from that time a gradually increasing dulness of percussion was found posteriorly and laterally, corresponding to the position the blood occupied in the thoracic cavity.

And further, the tumor in the axilla was never a fluctuating mass during life; it was always tense, showing the great pressure the blood in the thoracic cavity was under, and the great force it was capable of exerting; after death, the axillary tumor was soft under pressure.

The stridulous breathing noted before death was undoubtedly caused by the pressure of the encroaching blood-mass narrowing the calibre of the bronchi, and possibly the trachea.

PAPILLOMATOUS GROWTHS IN THE LARYNX OF A CHILD.

Read before the Pathological Society of Philadelphia.

BY R. M. BERTOLET, M.D.

I AM indebted to Dr. Mears for this fine specimen of laryngeal papillomata. Unfortunately, we have only the left lateral half of the larynx and trachea to exhibit; the other half of the organ is said to have presented about the same development of the papillary excrescences. The vocal cord is entirely concealed, and the Morgagnian ventricle is nearly filled by these finely-fringed growths, which are also seen covering the ventricular band and extending down over the subglottic region. From such an extensive invasion, which must have almost completely filled up the glottic fissure, it is easy to surmise the symptoms of croup, aphonia, and dyspnoea that must have manifested themselves during life.

The only history obtainable in the case is to the following effect. A male child, 2½ years old, about three months ago became hoarse, and soon presented symptoms of croup, for which it was unsuccessfully treated by a young medical student, until death by asphyxia occurred. No laryngoscopic examination being made during life, no attempt to remove the growths was made. Trache-

otomy was not performed. It cannot be ascertained whether the child presented any evidences of hereditary syphilis: the father, however, is said to have marks of constitutional syphilis.

The microscopic appearance of this specimen does not differ from that ordinarily seen in these growths; most of the papillæ are covered with several layers of tessellated epithelium, but at some points a layer of long cylindrical cells is seen covering the entire papillæ. Ciliated epithelium, however, is not formed. These epithelial cells are supported upon a very thin column of connective tissue, with small blood-vessels in the centre of each papilla.

The aggregation of a number of these papillary growths forms the papillomatous tumors of the larynx, presenting the well-known cauliflower appearance. In this region these growths do not differ from those formed upon other situations of the mucous membranes; they closely resemble the hypertrophied papillæ of the cutaneous surface as met with in condyloma and verruca. They are by far the most frequent variety of tumors found in the larynx. Of one hundred growths in the larynx, Mackenzie found no less than sixty-seven belonging to this class. They have been observed much more frequently in the male than in the female. The vocal cords seem to be their seat of predilection. Papillomata of the larynx are also more apt to occur at an earlier period of life than the other varieties of neoplasms. In the forty-eight cases of congenital laryngeal growths and in those occurring during infancy collected by Dr. Causit, nearly all, when examined microscopically, were found to belong to the non-malignant papillomata.

This makes the third case of laryngeal growth occurring during childhood that I have as yet seen and had an opportunity of examining microscopically. One was exhibited by Dr. William Pepper to the Philadelphia Pathological Society in 1871. The other is an unpublished case, which I desire to report briefly in this connection, since its microscopical appearances so closely resemble those of the preceding case that one description and illustration will serve for both. It was also the first instance in which I resorted to the freezing process to induce local anæsthesia of the larynx. This method and its practicability, it will be recollected, were fully detailed at the last meeting of the Society, in connection with the removal of the tracheal growths then exhibited.

E. M., æt. 11 years, was referred to me by Dr. Pepper in November, 1871. One and a half years previously the boy first began to grow hoarse; this gradually increased until he was no longer able to speak above a whisper. Upon attempting to speak loud, he complains of a painful sensation in his throat. When quiet and resting, the patient's breathing is always noisy, accompanied with prolonged inspirations. It becomes more hurried and difficult after any active exertion. He is frequently aroused from his sleep with more or less pronounced dyspnoea.—"sitting upright and gasping for breath." The aphonia is so pronounced that he is unable to speak loud enough for his teacher at school. No marked general or local affection appears to have ushered in the hoarseness in this case; the mother and

attending physician imagining that the boy was merely suffering with a protracted cold.

The attacks of dyspnoea, accompanied with lividity of the features, also occur occasionally during the daytime. The mother states very positively that these paroxysms have very often appeared for several years prior to the commencement of the aphonia, thus pointing to a very early period at which the papillomata first made their appearance. The general health of the patient is undisturbed.

The laryngoscope showed the mucous membrane lining the epiglottis and larynx to be congested and of a deep-red color. The anterior third of the rima glottidis is filled up with a large, uneven mass of papillary growths, of a reddish-white color. They arise from the mucous membrane covering the parts inserted in the receding angle of the thyroid above the vocal cords; a second smaller mass was subsequently observed arising from the under surface of the left vocal cord, also near its point of insertion into the thyroid cartilage. The movements of these growths during forced respiration were very slight.

The larynx was found to be extremely irritable, so that a spasm of the ventricular bands and vocal cords would ensue whenever any instrument was introduced. This irritability was in a great degree overcome by frequently catheterizing the parts, yet not sufficiently to permit of the evulsion of the growths. Local anæsthesia by means of the chloroform and morphia pencillings, owing to the youthfulness of the patient, was not deemed advisable. The freezing process, however, was applied, and, after several ineffectual attempts, finally permitted the parts to be manipulated with the greatest freedom. At first the pain caused by the rhigolene was too great to be endured for any length of time. Subsequent applications were better borne. The growths were removed by means of the wire écraseur and the crushing laryngeal forceps of Mackenzie, and the points of attachment subsequently cauterized with solid nitrate of silver. The patient being very irregular in his attendance, the treatment extended over a period of nearly one year: he was dismissed as cured in October, 1872, a slight roughness only remaining to the voice. The patient would curiously titillate either of his ears; referring the pain to the ear corresponding to the side of the larynx which had been seized upon by the forceps. A number of trials were made of this curious phenomenon by many of my colleagues, in which the patient invariably referred the pain to the ear of the same side as that of the larynx touched. An intense ringing noise, lasting from one to two minutes, would be complained of in the ear, which the patient said was the reason for the insertion of his little finger into the external meatus.

ARE THE CONVULSIONS OF CARBOLIC ACID POISONING CEREBRAL OR SPINAL IN THEIR ORIGIN?

BY JOHN R. HAYNES, M.D.

IN Prof. H. C. Wood's recent work on Therapeutics is a highly interesting account of the physiological and therapeutic action of carbolic acid. It is shown that this agent in poisonous doses produces general convulsions; and, further, that the seat of these convulsions is undetermined, the French observer Labé maintaining that they originate in the brain, and the German Salkowski asserting with equal positiveness that their source is in the spinal cord. It might be supposed that no difficulty would exist in settling this question by

poisoning one of the lower animals with the drug and dividing the cord. If convulsions still occurred in the posterior limbs, no doubt would exist of their spinal origin, and *vice versa*.

Both the observers mentioned have thus experimented, and each has found the results to corroborate his views.

The following experiments were undertaken with a view to the determination of the question.

Experiment I.—The spinal cord of a cat was divided between the first and second dorsal vertebrae, and three drachms of liquefied carbolic acid were injected into the connective tissue. In fifteen minutes the muscles of the head, anterior extremities, and abdominal walls began to contract spasmodically, and soon well-developed clonic convulsions set in. The posterior extremities were moved slightly by the action of the abdominal muscles. The dorsal aspect of the cat remained perfectly quiescent. As soon as the convulsions became marked, the animal, which had remained in a semi-unconscious state after ether had been given to destroy the pain of the operation, was killed.

Experiment II.—Three drachms of liquefied carbolic acid were injected into the peritoneal cavity and subcutaneous connective tissue of a cat, after dividing the spinal cord between the fourth and fifth cervical vertebrae. In ten minutes the muscles of the face were convulsed, together with the diaphragm. The extremities remained motionless, except when excited by local irritation, when marked reflex movements occurred. The animal was killed in half an hour.

Experiment III.—Two drachms of liquefied carbolic acid were injected into the cellular tissue of a cat. Fifteen minutes afterwards convulsive movements of the head and extremities commenced, and continued to increase in strength. In half an hour another drachm of the acid was injected, and the convulsions grew still stronger. After a second interval of half an hour, an additional drachm of acid was injected, making half an ounce in all. The convulsions shortly became less marked in the posterior extremities, and then ceased. The anterior extremities moved more feebly than before, but did not become still until death, which happened three hours after the first injection.

From these experiments it is evident that the convulsions of carbolic acid poisoning are of cerebral origin. In experiments showing a contrary result, the spinal cord could not have been entirely divided.

THE TREATMENT OF EPISTAXIS.

BY ELLIOTT RICHARDSON, M.D.

HAVING read recently, in *The Dublin Journal of Medical Sciences* for November 1, 1873, a paper by Dr. Leeper, describing a simple method of arresting hemorrhage from the nose by the use of suppositories containing persulphate of iron, it occurred to me that it might be worth while to offer to the readers of the *Philadelphia Medical Times* a brief account of a somewhat similar procedure which I found very efficacious in a case of very obstinate and profuse bleeding from the nares, which came under my care when a resident in the Pennsylvania Hospital, during the winter of 1869-70. The patient was a negro woman, who had been subject to occasional attacks of epistaxis,

which had always yielded to the use of cold or other simple remedies.

When she came to the hospital she said she had been bleeding from the nose for several days; but as her appearance did not indicate extreme anæmia, and as the hemorrhage was promptly stopped by some simple application which I do not now recollect, and did not return within the hour which I directed her to wait, I was not inclined to credit her statement, and sent her home, with directions to return if epistaxis should again occur. In the course of three or four hours she returned, with the blood again flowing. She was now placed at perfect rest in bed, and the hemorrhage again checked, only, however, to return with increased profusion in about half an hour. After several remedies were employed unsuccessfully, I concluded to try a more continued application of styptic material to the bleeding surface. Two strips of lint were cut about an inch wide, and over one surface of each powdered persulphate of iron was sprinkled. Each strip was then rolled up, making a plug large enough to fit closely in the nostril, containing, within, the styptic powder, and leaving only the clean surface of lint to come in contact with the mucous membrane. One of these was placed well within each nostril, and retained in position, all clots having previously been removed. As successive portions of the rolls became moistened with blood, the persulphate was dissolved out, and speedily stopped the hemorrhage. The plugs were allowed to remain in for twelve to twenty-four hours, when they were removed without difficulty, and without the occurrence of further hemorrhage.

In the number of your journal for August 1, 1872, Dr. Curtin reports a somewhat similar method of using tannic acid, though, if I mistake not, he advises the tannic acid to be brought directly in contact with the mucous membrane.

The advantages of the method I have described are evident, since it enables the surgeon to place a repository of a powerful styptic near the seat of hemorrhage, without bringing it in direct contact with the mucous membrane, thus avoiding the superficial but annoying slough which always follows the direct application of dry persulphate of iron or a concentrated solution of it. It also furnishes an abundant supply of the material, which is dissolved out only as it is wanted by the bleeding vessels.

In cases where it will answer the desired purpose it is infinitely less difficult to apply, and less oppressive to the patient, than the plugging of the anterior and posterior nares,—an operation always disagreeable both to the patient and the surgeon. Dr. Leeper advises to combine with the local treatment free internal use of ergot.

CASE OF ASCITES CURED BY DIGITALIS.

BY W. S. MAXWELL, M.D.

LOUISA R., aged 36 (colored), had been suffering for several months with abdominal pain, suppressed menses, and general debility, with swelling of the abdomen. April 1, 1873, my father saw her with me.

The abdomen was greatly distended, and contained, I suppose, from three to four gallons of fluid. Bowels were constipated, breathing difficult, violent colics would ensue on eating the most simple things. Urine was scanty and high-colored, pulse quick and feeble. She was unable to lie down at all, owing to the difficulty of breathing.

Treatment.—Hydrargyri chloridum mite, gr. v, was ordered at bedtime, with potassii bitartras and jalap in the morning as a purge; this was continued for some time with good effects at first, but it soon ceased to do any good. Digitalis, squill, infusion of juniper-berries, and numerous other diuretics, were given, while the strength was supported by tonics, stimulants, and nutritious diet, but without avail.

June 1.—We saw her together again. The symptoms were growing worse. Tapping was suggested, but postponed for a while. Two grains hydrargyri chloridum mite with one-fourth grain of opium were ordered three times a day, and fifteen drops of tincture of digitalis every six hours. This course was persevered in for several weeks; the fluid was all eliminated by the kidneys.

At this time, March 2, 1874, the woman is enjoying good health.

STILL-POND, Md.

TRANSLATIONS.

THE LOCAL TREATMENT OF CAVITIES IN THE LUNGS (Fr. Mosler: *Centralblatt für die Med. Wissenschaften*).—In the cases of two patients who had cavities in their lungs, lying near the surface, and of whose recoveries no hopes were entertained, Mosler performed the operation of paracentesis thoracis, and injected a dilute solution of the permanganate of potassa.

There was no reaction in consequence of the procedure, and the general symptoms of the patients were so much more favorable that he was encouraged to make a fistula directly into the lungs. The patient who was thus operated upon was a man aged 49 years, who had had a cavity in the upper lobe of the right lung for five years, and who was also suffering from amyloid degeneration of the kidney and intestine.

On the 2d of July, 1873, a perforation was made in the second intercostal space, five and a half centimetres to the right of the edge of the sternum, through the intercostal muscles and the pleura, and was continued into the cavity in the lung. Into the opening thus made a silver drainage-tube was inserted, through which there was a free discharge of pus, which was increased by coughing. The operation was not followed by fever, and the general condition of the patient was much improved. An attack of hæmoptysis occurred; for the relief of this, a diluted solution of the persulphate of iron was injected through the canula, with the happiest effect; and, later in the treatment, inhalations of atomized carbolic acid and tincture of iodine were made in the same way. The pus became more healthy, was less in amount, and the process in the lung seemed to be retarded in its progress; the patient, however, gradually sank, and died four months after the operation.

On account of the discharge of pus, which continued to the last, the introduction of carbolic acid through the canula was continued twice daily until the death of the patient.

At the autopsy, the two layers of the pleura were found to be adherent over the whole of the right lung, and on the upper lobe of the lung the change had gone on to the formation of a thick, white false-membrane, of an almost cartilaginous consistence. Through the anterior part of the other lobe there was a fistulous canal leading to a cavity filled with a yellow, creamy fluid,

which involved the greater part of the upper lobe. This cavity was lined partly with a smooth membrane, and partly with ridges upon the apices of which some feeble granulations were to be seen. The spleen, kidneys, and intestines were found in an advanced stage of amyloid degeneration. From the results of the treatment pursued in the case, Mosler concludes that the lungs are more tolerant of surgical interference than has been supposed. He thinks, too, that the method is of some value in rendering the symptoms less severe, and hopes that more careful experiments of a similar character will be made.

W. A.

OPERATION FOR CANCER OF THE RECTUM BY MEANS OF THE GALVANIC CAUTERY.—Dr. Verneuil is said (*Gaz. Méd. de Paris*) to have performed recently the following operation for the relief of cancer of the rectum.

By aid of the galvanic knife, a horse-shoe incision was made, the convex portion of which was situated between the anus and the vulvar commissure, while the branches terminated on a level with the point of the coccyx.

These branches were united by a transverse incision a little behind the anus, and thus a flap was formed which might be called coccygeal, since it was detached from the deeper parts: it was held out of the way by an assistant. The various tissues being divided by delicate strokes of the galvanic knife, the isolation of the rectum from the vaginal walls was completed, and, the superior limits of the tumor being reached back of the rectum, the latter was divided longitudinally by the écraseur. By using the écraseur four times, the upper limits of the tumor were then separated, and the entire mass detached.

About two and three-eighths inches of the rectum were removed by this operation, which possesses the advantage of being performed without hemorrhage and allowing a full view of each step of the procedure. When last heard from, after several weeks, the patient was doing very well.

A. V. H.

CUTANEOUS DISEASE CAUSED BY THE BROMIDE OF POTASSIUM.—Dr. Neumann reports (*Wiener Med. Presse*) the case of a child æt. 5 months, suffering from a cutaneous eruption due to large doses of bromide of potash. The child had, in the course of a prolonged treatment for convulsions, taken sixteen scruples of the salt, and the eruption made its appearance after twelve scruples had been taken. Tubercles of a hemispherical shape, the size of a pea, upon the summits of some of which were crusts, were found on the body and the hairy scalp. After the removal of the crusts there could be pressed out a mass of sebaceous matter, colored yellow by the admixture of pus. On the forehead, and more especially on the skin of the cheeks, the spots of the eruption were larger. Upon the left cheek there was a spot about the size of a thaler, covered with dry crusts of a dark-brown color. Beneath these crusts were numerous protuberances of a warty character. The eruption was most marked on the lower extremities. In addition to the crusts described above, upon the leg there were seen also bullæ of various sizes, filled with a fluid of a yellowish tinge. A microscopic examination demonstrated marked changes in the upper part of the crusts, and also in the hair-follicles and in the sebaceous glands.

W. A.

AMYLOID DEGENERATION OF CARTILAGE.—M. Hé-nocque (*Gazette Médicale*, February, 1874, p. 95) describes briefly amyloid degeneration of the bone-cartilages,—a degeneration whose possibility has previously been proven by Virchow and by Hagen.

PHILADELPHIA
MEDICAL TIMES.
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The Philadelphia Medical Times is an independent journal, devoted to no ends or interests whatever but those common to all who cultivate the science of medicine. Its columns are open to all those who wish to express their views on any subject coming within its legitimate sphere.

We invite contributions, reports of cases, notes and queries, medical news, and whatever may tend to increase the value of our pages.

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EDITORIAL.

OUR ANNUAL OVERFLOW.

IN our editorial of last week we advanced the propositions that the medical colleges (as at present organized) are the enemies of the profession, and that the faculties are not to be blamed for this and are not to be expected to alter it. The deficiencies of our educational system are so generally admitted that they scarcely need any further illustration than that which we gave last week. In the various discussions upon the subject which we have listened to, however, we have never yet seen any one who was bold enough to tell the whole truth; and to-day, at the risk of incurring the curse which the Jewish Bible laid upon those who uncovered the nakedness of their parents, we propose to say some things which we believe the profession needs to look squarely and honestly in the face; for, in all earnestness, it seems to us that, in spite of the clamor, we are somewhat in the position of the man who dares not be honest to himself and place his deeds and his character at the judgment-seat of his own reason.

The theory of medical education at present is that the candidate studies a year and a half in the office of some practitioner, and then attends two courses of lectures before he graduates, making, in all, a term of three years. The fact is that a large proportion of the candidates really study only one year and a half, and some only one year. A farmer's son determines to be a doctor; forthwith he applies to the family physician, is dubbed a

medical student, and borrows a treatise by some ancient worthy,—a treatise which was, perhaps, the meat and the drink of his preceptor's student-life, thirty years before. So far, so good; but money is scarce, and through the long summer months the farmer utilizes his heir in the harvest-field, or more commonly the young man teaches the district school to gain the means which shall support him during the winter in the city. October finds him at the college. All winter long he labors, or loafs, as the case may be. The next spring he hies away to the country, to return again in the autumn; having, it may be, spent the summer precisely as the previous one, or else having gone over certain text-books very much in the sense of the boy who laid his book on the floor, stepped over it, and, in reply to his teacher's questions, vigorously asserted that he had been over his lesson three times. Often the last summer of a student's life is given to honest study, but often it is not; and it does not pass the power of human knowledge to know men who have graduated when they had done no real work until the last winter session. The knowledge which the examining board has as to the time during which the candidate has prosecuted his studies is often derived solely from the statements of the candidate himself, and from his having bought two sets of tickets. We know that at least sometimes untrue statements pass unchallenged: so that the man who has not, except on his thesis-paper, even pretended to study for more than a year and a half is recorded before the degree-conferring power as a three-years student. These things being so, it is evidently preposterous to claim that our graduates are students of three years' standing. What is the examination that tests the fitness of candidates thus prepared? Performed by men whose bread-and-butter depends upon the number that they let through,—performed by these men in secret, with no responsibility to any power but their own consciences,—performed with the knowledge, or at least with the belief, that if they do not dub the medical knight a rival organization will do it for him gladly,—performed under these circumstances, the examination cannot be anything other than it is, *i.e.*, an apology to public opinion, the last act of a farce before the tragedy commences.

If any one doubts these things, let him ask our army medical examining boards during the late war as to the deficiencies of many of the graduates of the most respectable schools; or let him ask coaches, or, as they are commonly called, "quizzers," and, our word for it, he can find men who have had hundreds of students, good, indifferent, and bad, who will testify that they have graduated num-

bers of ignoramuses, and have lost scarcely one per cent. of the applicants. If there be yet a doubting Thomas, let him get the private confidence of some consultant, and find the fruits of this annual sowing.

How can a profession be honored that sells its birthright for a mess of pottage? How can any body of men be distinguished as a whole, when a few hundred dollars and a few months' work give admission to the ranks? It is hard to tell whether to laugh or to cry over the solemn farces of Commencement-Day; but assuredly the spectacle of grave critics searching assiduously for the causes of the profession's low estate, when the mud of the quagmire is upon their very persons, is most laughable.

Unless these critics are the blindest leaders of the blind, they must be hugging delusions that they may hide that which they are afraid to see and may quiet the fancies of uneasy consciences. The marvel is not that we have so little, but that we have so much, of public confidence. The reason that we are still looked upon with a measure of esteem is that there are numbers of medical students who feel deeply the responsibilities of their position, and avail themselves of the opportunities offered to become really educated physicians; the fault of the colleges being not that they do not afford sufficient opportunity to those desirous of eminence, but that they do not require the student to prepare himself thoroughly before granting him a diploma.

We had fully expected to discuss our second proposition in the present editorial, but our pen has run away with us, and, the allotted space being already filled, our final words must be postponed for another week.

PROCEEDINGS OF SOCIETIES.

PATHOLOGICAL SOCIETY OF PHILADELPHIA.

THURSDAY EVENING, FEBRUARY 12, 1874.

THE PRESIDENT, DR. WM. PEPPER, in the chair.

DR. JOSEPH G. RICHARDSON presented, for Dr. A. FRICKE, the specimens from a case of *general tuberculosis with enlarged lymphatics* from a German girl aged 21 years, admitted into the German Hospital on November 17, 1873. The principal symptoms upon admission were slight cough, headache, pain in the lumbar region and also upon the inner side of the limbs. Her own expression was that she felt tired, and only wished to get into bed. Her clothing was wet; her feet were very cold and wet. The most noticeable feature was great enlargement of the cervical glands. The lymphatics in other portions of the body were also enlarged, as was found upon subsequent examination.

At the very first, symptoms of a typhoid character began to manifest themselves. During the second twenty-four hours after her admission she gradually became unconscious. No food, however, liquid or concentrated, would she swallow. This condition continued, gradually becoming more grave, until she died on November 27, 1873, ten days after admission.

A *post-mortem* examination was made; it was found that all or nearly all of the organs were more or less infiltrated with tubercles. There were evidences of violent inflammation of the brain: tuberculous deposit at the base, and considerable exudation into the ventricles. The lungs were studded with small abscesses. The liver was affected also, as was the spleen. The mesenteric glands were greatly enlarged; also, the deep lymphatics of the abdomen and pelvis.

Dr. H. LENOX HODGE exhibited an *ovarian tumor*, removed by Dr. Agnew. The patient was 33 years of age, married, and the mother of two children. The tumor was first noticed in January, 1873; since then it had steadily increased in size. She was tapped in December, and again in January. The tumor is multi-lobular, and weighed eighteen pounds, solid and fluid. The microscopical examination has been made by Dr. Richardson.

Dr. JOSEPH G. RICHARDSON said he had recently made some examinations of ovarian fluid with a view to determine the presence of the so-called *ovarian cell* of Dr. Drysdale, and that in some six examinations which he had made he had invariably discovered it.

Dr. JAMES TYSON said he thought the way to settle the question was to examine, not ovarian fluid, in which the cell undoubtedly existed, but fluids from other sources, with the view of determining the possibility of its occurrence elsewhere.

Dr. T. desired also to say that in the discussions into which he had entered during the past year upon this subject, and in which he had taken decided ground against the existence of any peculiar ovarian cell, the idea he had entertained of the characters of the cell referred to by Dr. Drysdale was erroneous. He had thought Dr. Drysdale alluded to the ordinary compound granular cell or exudation corpuscle of Gluge; but only recently, from the paper which Dr. Drysdale had kindly sent him, he had learned that the cell resembled more in size and characters the *leucocyte* in a state of fatty degeneration, and he had not as yet made any comparative observations to determine the presence of this body in other than ovarian tumor.

Dr. RICHARDSON remarked that if it could be proved that the leucocyte exhibited characters in its degeneration which were peculiar to ovarian fluid as contrasted with other abdominal liquids, it would still serve to detect such fluid, and might with propriety be called an "ovarian cell."

Dr. HODGE said there was one point in connection with this ovarian cell which he thought had not been alluded to even by Dr. Drysdale,—that is, as to whether it was found only in ovarian fluid, or in the semi-liquid gelatinous and solid matter of which ovarian tumors are also made up.

Dr. BERTOLET said he had not a clear idea of what was comprised by the term "*leucocytes*," and desired much to know its limitations.

Dr. TYSON replied that, after other better-known histologists, he had always used the word *leucocyte* in a generic sense, as including all that class of small, round, variously granular cells which, according to the situations in which they were found, were variously called white blood-corpuscles, mucus-corpuscles, young pus-corpuscles, or the round cells of connective tissue,—in other words, *dead amœboid cells*.

Dr. BERTOLET said he thought this was an error, in which theory had been allowed to supplant practice;

that the white corpuscle and pus-corpuscle were not the same.

Dr. RICHARDSON said the word leucocyte had been originally introduced by Charles Robin, who applied it to the class of bodies named by Dr. Tyson, whether alive or dead, as well as to exudation-corpuscles, and he believed also, provisionally, salivary corpuscles. He thought that if any one would treat white corpuscles contained in a drop of blood from his finger, first with water by introducing a small quantity at the edge of the thin glass cover, and then with weak aniline solution, in the manner described in his report on the white blood-corpuscle (*Am. Med. Assoc. Trans.*, 1872), he would have no difficulty in finding many globules which exhibited two or three, and occasionally those which displayed four or five, well-formed and strongly-tinted nuclei, and which manifested a precise identity, in that respect at least, with the leucocytes of pus, as described by older pathologists. By this experiment it was easily demonstrated that the characteristic formerly so much relied upon for the recognition of the pus-cell, and quoted by Dr. Bertolet,—namely, that it possessed two, three, or more nuclei,—was valueless as a means for its discrimination from the leucocytes of blood.

Dr. TYSON admitted that pus-corpuscles soon became very granular from fatty degeneration, and then presented objects which did not so closely resemble the white blood-corpuscle; but in their young state he did not think they could be distinguished, and to acetic acid and water both responded identically.

Dr. RICHARDSON said that about one white corpuscle out of thirty is ordinarily more granular than its companions, and he was strongly inclined to think that these white corpuscles were also the seat of fatty degeneration.

The PRESIDENT said it was very important to have clear ideas as to the exact application of terms. He presumed, of course, that this discussion referred simply to the morphology, and not the vital properties or developmental tendencies, of the cells in question. He said that he himself had been called upon to study cases where inflammation had obliterated the trunks of vessels,—a matter which brought up directly the question of being able to distinguish between the corpuscles in the surrounding inflamed tissue and the white corpuscles which remained in the softened clots. By no means which were available could he distinguish between the two.

Dr. RICHARDSON thought the more he studied the subject in connection with Cohnheim's observations, the more he was led to conclude that living leucocytes of pus and blood were identical physiologically as well as morphologically.

Dr. MORRIS LONGSTRETH exhibited the *specimens from Dr. Levis's case of aneurism of the subclavian artery*, treated by the introduction of horse-hair. (See Original Communication in current number of the *Medical Times*.)

Dr. HUTCHINSON said that he had examined the patient, both before and after the operation. There was a pulsating tumor above the clavicle, and another below it. Some of those who saw the case believed that the latter was situated entirely outside the chest-walls; while others thought it was due to the protrusion of an intra-thoracic aneurism. He had himself held the former opinion, because he thought he could feel the ribs passing beneath the tumor, into which the axillary artery could be traced. The autopsy showed that he was wrong, but it also demonstrated that the view that the aneurism had begun within the chest was also incorrect.

Dr. JOHN ASHHURST, Jr., remarked that an interesting fact revealed by the post-mortem examination was

the existence of *two* aneurisms, one arising from the upper surface of the vessel and extending above the clavicle, and the other originating on the lower surface and passing downwards into the chest, eroding the ribs, and finally making its appearance anteriorly. This condition does not appear to have been suspected before death, and the specimen thus furnishes an illustration of the frequent impossibility, in cases of internal aneurism, of making a positive diagnosis.

Dr. HUTCHINSON said there was no question but that the aneurism became more diffuse after the introduction of the horse-hairs. He had examined it after the operation, and there was an immense increase, while the aneurism above the clavicle very early became solid, and no expansive pulsations could be felt after a few days.

The PRESIDENT asked Dr. Hutchinson in what the rapid increase of the aneurism after the operation revealed itself, whether by extension of the area of dulness in the infra-clavicular region, or otherwise.

Dr. HUTCHINSON said he did not know what changes occurred in the first week, but that after the operation the dulness had extended very rapidly to the third, and probably to the fourth, rib. There was also posteriorly a corresponding extension of dulness, and there was bloody expectoration. He thought these symptoms might have been due to a low form of inflammation set up about the sac.

The PRESIDENT asked to how great an extent could the coats of the aorta be traced into the aneurismal cavity.

Dr. LONGSTRETH said he and Dr. Meigs had made a very careful examination, with a view of tracing the sac, and found none within the border of that cavity; within half an inch of where the aneurism gave way, there was no trace of anything but clot.

Dr. R. M. BERTOLET presented, for Dr. J. EWING MEARS, a portion of the *larynx of a child two and a half years old, filled with papillomata*. The child was healthy until two months ago, when there appeared symptoms of croup, which continued until death. It was born of syphilitic parents. The case is published in the current number of the *Times*.

Dr. JAMES TYSON presented a specimen of *intussusception* of the small intestine into the large, through the ileo-cæcal valve, from an infant boy seven months old. On Sunday, January 24, the child was remarkably bright, playing and romping with his father to an extreme degree. On the following day he had several discharges of blood, but no other matter, from the bowels, and towards evening vomiting set in. In the evening Dr. T. saw him, and, suspecting the condition at once, directed a dose of oil, followed by small doses of calomel (one-sixth gr. every hour). On the following day injections were ordered, and the calomel continued, to no purpose. On Wednesday the vomiting almost ceased, but the bowels remained unopened, and there was distinct dulness in the right iliac region. The vomiting returned the following day, there was more discharge of blood from the bowels, and the child died at 4 P.M. on the 29th, having had quite a normal stool immediately before death.

The *post-mortem* examination was made the next day. The abdomen, which was never markedly tympanitic, contained a large amount of fetid sero-sanguinolent fluid. There were peritonitis, and intense injection of the bowel throughout almost its entire extent, and the tumor presented was found at the seat of the ileo-cæcal valve. It was three inches in diameter, and a portion of intensely congested small intestine had passed through the orifice and formed the tumor.

Dr. TYSON also exhibited a *gall-stone* three-eighths of an inch in diameter, a nearly perfect octahedron, with somewhat irregular facets, passed by an unmarried

female about 30 years of age. She was jaundiced, her urine was loaded with bile, and she had the usual pain of biliary colic, which was somewhat intermittent, being worse at night. After an unusually severe attack the stools were examined, this stone found, and she rapidly recovered.

REVIEWS AND BOOK NOTICES.

ON DISEASES OF THE CHEST; BEING CONTRIBUTIONS TO THEIR CLINICAL HISTORY, PATHOLOGY, AND TREATMENT. By A. T. H. WATERS, M.D., Fellow of the Royal College of Physicians of London; Physician to the Royal Infirmary, etc., etc., Liverpool. Second Edition, Revised and Enlarged. Philadelphia, Lindsay & Blakiston, 1874. Pp. 431.

In this work, the first edition of which, forming a book of little more than half the size of the present volume, made its appearance in 1868, the author's object has been, as he states, to depict disease as found at the bedside, and to illustrate the application of therapeutics to thoracic affections by details of cases, without attempting to furnish a systematic treatise on diseases of the chest. It constitutes one of those valuable records of careful observation, made by a man of sound judgment and ripe experience in that best of all fields for correct medical investigation, a well-appointed hospital,—records which have for centuries formed the most substantial basis for the science of medicine. Some such harvest as this is, we believe, due to the profession from every man who enjoys the advantages of a hospital appointment; and, indeed, in those cases when year after year less fortunately-placed physicians come seeking fruit and finding none, we see no reason why the doom of the barren fig-tree should not be pronounced.

Dr. Waters first offers some observations upon the anatomy of the lung, in regard to the epithelium of the air-vesicles, on which point he differs from most modern authorities, including Rindfleisch and Franz Schulze; he then proceeds to consider the different forms and characteristics of pneumonia, in seven chapters, being the substance of nine clinical lectures; emphysema, in six chapters; and, more briefly, pleurisy, phthisis, hay-asthma, asphyxia, pericarditis, valvular disease of the heart, and thoracic aneurism.

Since it is manifestly impossible to furnish our readers with abstracts of these various lectures within the limits of this present notice, we will confine ourselves to a short *résumé* of our author's remarks upon the use of chloral hydrate in certain diseases of the chest. In the first place, Dr. Waters has found this drug "very valuable" in bronchitis, especially when complicated with emphysema, and when opium, if administered in quantities sufficient to produce sleep, might prove fatal. In such cases, from twenty to thirty grains of chloral have proved both efficient and safe as a hypnotic; whilst, to allay cough, five-grain doses of the same drug have sufficed. Our author has found chloral useful in procuring sleep in cases of asthma, both of the purely spasmodic kind and of that form complicated with emphysema; and has likewise employed it with great advantage in cases of phthisis pulmonalis and of disease of the heart, including both the fatty degeneration and valvular affections of the latter organ.

Dr. Waters mentions a few cases where distressing excitement or prolonged stupor followed the exhibition of chloral, and cautions us against its use in patients who are in the habit of smoking much and of drinking freely; also against continuing it for a long time, lest it enfeeble the circulation. He recommends that it should be administered in tincture of orange-peel or syrup of

Tolu, well diluted with an aromatic water; the dose being given after the patient is in bed and quite ready to compose himself for sleep, since walking about, or even crossing a room, after swallowing the mixture, will often bring on vomiting.

I. G. R.

A TREATISE ON THE DISEASES OF THE EYE. By J. SOELBERG WELLS, F.R.C.S. Second American, from the Third English Edition. Pp. 800. Philadelphia, H. C. Lea, 1873.

TREATISE ON THE DISEASES OF THE EYE. By Dr. CARL STELLWAG VON CARION, Professor of Ophthalmology in the Imperial Royal University of Vienna. Translated from the Fourth German Edition by Drs. D. J. ST. JOHN ROOSA, CHARLES S. GULL, and CHARLES E. HACKLEY. Pp. 171. W. Wood & Co., New York, 1873.

The prompt appearance of new editions of these standard works on diseases of the eye may fairly be taken as an index of the growing importance of this specialty, and of its appreciation by the profession at large. Owing to the diligence of the authors, and the care of the American editors, they represent fairly all our accurate and firmly-established information on the subject. The new methods of operation for cataract (Liebreich, Le Brun, Streatfield) are described but not criticised, the writers preferring, apparently, to wait for the slow but accurate appreciation of them gained by their application in a long series of cases. In both books the valuable researches of Schwalke, Schmidt, and Manz, demonstrating the lymphatic circulation in the eyeball and optic nerve, and the important rôle which it at times plays in the production of choked disk and inflammation of the optic nerve, have received due attention. The chapters on Diseases of the Retina and the Optic Nerve, treating, as they do, of the changes manifested in these organs in diseases of the nervous system, as also of those which are local manifestations of general diseases or lesions of particular organs, *e.g.*, those occurring in syphilis, leucæmia, diabetes, in Bright's disease, cerebral tumors, meningitis, etc., will be read with especial interest by the general practitioner. We are glad to see that the translators of Stellwag have insisted so strongly on the advantages obtained in ophthalmoscopic examination by the use of the upright image, which, owing to its magnifying the image of the fundus more strongly, enables us to see much more readily those minute changes which, in the use of the inverted image, owing to its smaller size and to the flood of light, are apt to escape our attention. Moreover, we can, in the direct method, employ the plane mirror and a comparatively feeble light, and thus render the examination far less annoying to the patient. The ophthalmoscopic plates appended to Stellwag are not so good as those in the earlier German editions; and those in Wells, taken from Liebreich's atlas, are less accurate than the originals.

W. F. N.

DICTIONARY OF ELEVATIONS, AND CLIMATIC REGISTER OF THE UNITED STATES. By J. M. TONER, M.D. New York, D. Van Nostrand, 1874.

This little book, or overgrown pamphlet, of 100 pages, is evidently the result of a great deal of work and research upon the part of its author, and must be of great use as a book of reference to all students of the climatology of this great country. It contains, in addition to elevations, the latitude, mean annual temperature, and total annual rain-fall of all the cities, towns, and localities in the United States concerning which the requisite data have been obtainable. The orographic and other physical peculiarities of North America have also been noted with great care. The list of localities seems to be very full; but either our geography is at fault, or else the author is one of those sanguine and patriotic mortals who believe that this

great Yankee nation is to gorge the universe, and that the eagle of freedom is to screech from all the world's mountain-tops. We judge this because we find included in this list of elevations of the United States localities in Egypt, the Himalaya Mountains, Australia, South America, Europe, etc., etc. Of course this faith of the author in the nation of his forefathers does not lessen but enhances the value of the book, which we highly commend as a work of reference to all interested in the subject.

LA VIE: PHYSIOLOGIE HUMAINE APPLIQUÉE À L'HYGIÈNE ET LA MÉDECINE. Par le DR. GUSTAVE LE BON. Paris, J. Rothschild, 1874.

This book contains within its muslin covers a little over nine hundred pages of large type, and therefore does not afford room for a complete discussion of the great science of physiology. Indeed, we do not think the author of the work would claim any such position for his bantling, but would be well satisfied with the acknowledgment that it is a clear, well-written, and easily-read book, of such character as is wanted by the student of medicine; stating briefly and dogmatically well-established facts, and leaving to the future all the doubtful problems. As its name indicates, it is a treatise upon what we know in this country as the "institutes of medicine" rather than upon pure physiology. Thus, in the chapter upon blood, transfusion is discussed at considerable length, whilst the subject of the origin of blood is dismissed in a few words; and in the chapter upon the eye, such topics as the hygiene of myopia, and the choice of glasses, have found entrance.

A prominent feature of the book is the illustrations, of which there are three hundred and thirty-nine woodcuts: some of them quite striking, nearly all of them very good. It appears in some places as though an anatomical work had been emptied into the treatise, as we have page after page of cuts which are purely anatomical, representing bones, muscles, nerves, arteries, or viscera, as the case may be. In a student's book these illustrations are in place, but we opine that practitioners would prefer the space occupied by discussions of some of the questions which are imperfectly considered, seemingly from want of space.

GLEANINGS FROM OUR EXCHANGES.

DISLOCATION OF THE SPINE—REDUCTION.—The following case, reported by Dr. L. W. Bliss, is taken from the *Transactions of the Michigan Medical Society*:

A man, aged 41 years, was superintending the raising of a stick of timber, under which he had his shoulder, when it fell, carrying him beneath it, forcing his breast forward upon his knees, dislocating the spine at the eleventh dorsal vertebra, and fracturing the ninth, tenth, and eleventh ribs at their surgical neck, and the spinous process of the eleventh dorsal vertebra. He was removed from beneath the timber in an almost insensible condition, from which he recovered in about one-half hour, with complete paralysis of that portion of the body below the dislocation. An attempt was made to replace the vertebra by pressure, which failed, and extension and counter-extension were followed by a similar result. The surgeon then knelt upon the floor, and, stationing assistants at both extremities of the patient, he directed the body to be forcibly flexed over his knees as a fulcrum, while one hand was placed upon the dislocated part. In this manner, a reduction was effected, the spine resuming its natural appearance when the body was extended. In three minutes after the reduction the patient was

able to move his feet, and sensibility returned, while the power of motion was recovered in half an hour. With the exception of retention of urine, lasting three days, no untoward symptom supervened. The patient was confined to bed for seven weeks, and availed himself of the assistance of crutches for five months.—*Boston Medical and Surgical Journal*.

BROMO-HYPERIDROSIS OF THE FEET (*Irish Hospital Gazette*, February 16, 1874).—Mr. Maturin reports the case of a girl, æt. 16, who was affected in the following manner by the use of a pair of slippers having vulcanized india-rubber soles with cloth uppers, the india-rubber covering the cloth over the toes, the posterior aspects of the heels, and a margin about half an inch broad along the sides. After wearing them a few days her feet became cold and white during the day, and perspired profusely; shortly after going to bed they grew red and swollen, with a burning, prickling sensation. In the next fortnight the perspiration increased, and the feet became excessively tender; and a week later, the slippers having been discarded, she applied for treatment. The soles and sides of her feet were white and sodden, extremely sensitive, and were covered with an offensive perspiration. The upper surfaces of the toes were slightly affected,—the diseased portion corresponding exactly to that covered by the india-rubber on the slippers. The patient was feverish, and had no appetite. She was ordered quinia in five-grain doses, low diet, and perfect rest. The next day her fever was less; the feet, however, were hot, the affected portions being of a bright-red color, and so tender around the margins, where the epidermis was thin, that she could not bear to have them touched. The odor and perspiration were both excessive. The quinine was continued, and she was given $\frac{1}{100}$ gr. of atropia every three hours. All the symptoms soon abated in severity under this treatment. She was kept moderately atropized for about five days, when she was entirely restored to health. The india-rubber in her slippers was carefully analyzed, but no deleterious impurities were discovered. The supposition is, therefore, that the disease originated simply from the irritation of the accumulated products of decomposed skin-excretions.

GALVANO-CAUTERY IN TRACHEOTOMY (*Le Mouvement Medical*, January 10, 1874).—M. Krishaber reports two cases of tracheotomy. The first was in a man æt. 45, affected with vegetations seated in the trachea and the subglottic portion of the larynx, and occupying almost entirely the superior part of the respiratory canal. The operation was performed with the galvanic knife, and the sections were made slowly and carefully; all flow of blood ceased at once on touching with the knife the artery which produced it, and this was also the case in a profuse secondary hemorrhage, which took place some hours after the operation.

The other patient was a man, æt. 63, with a laryngeal tumor which was causing more and more intense aphonia and dyspnoea, and thus rendered asphyxia imminent and tracheotomy inevitable. The operation was conducted in the same manner, but the hemorrhage necessitated the application of a ligature, and the tracheal opening had to be made with a bistoury. M. Krishaber, while admitting the hæmostatic power of the galvanic knife, believes that the ligature and bistoury are still preferable, as offering more security against secondary hemorrhage.

CEREBRO-SPINAL ARACHNITIS (*The Irish Hospital Gazette*, January 1, 1874).—At a meeting of the Pathological Society of Dublin, Dr. Grimshaw reported the case of a young man, æt. 23, who was suddenly seized

with vomiting, faintness, and pain of head and back. He rapidly developed the symptoms of acute cerebro-spinal arachnitis, and died at the end of five days during the supervention of a convulsion. There were no spasms until immediately before death; no purpuric spots were noticed before death; the pulse never had the characteristic jerk so often observed; there was no hyperæsthesia. The post-mortem examination revealed slight softening of a small space of the upper portion of the spinal cord, and a thin layer of subarachnoid lymph effused over its cervical region; hyperæmia of the sinuses and veins, and deposition of yellowish lymph for a limited space over the parts at the base of the brain.

MORBID ANATOMY OF SCARLET FEVER (*Irish Hospital Gazette*, February 16, 1874).—Dr. A. W. Foot, at a meeting of the Dublin Pathological Society, presented specimens, taken from children æt. 7 and 12 years, who had died, one on the fourth, the other on the third day, of an attack of scarlet fever.

In both cases the solitary follicles were universally enlarged throughout the small intestines, but especially in the first and last portions of the bowel, and there was a corresponding tumefaction of the mesenteric glands. The agminated follicles were morbidly prominent and distinct in the elder child, who appeared to have died from the consequences of mechanical dyspnoea, and in whom there had been a profuse pharyngeal catarrh, with pulmonary œdema. The tonsils were found to be in a condition of "necrosis," containing masses of dead tissue in the form of shreddy sloughs.

In neither of the cases were the renal organs abnormal in size or weight, and their vascularity was but slightly increased.

EXTERNAL APPLICATION OF CHLORAL (*L'Union Pharmaceutique*, January, 1874).—M. Martineau has derived great advantage from the topical employment of solutions of chloral. In the bed-sores of typhoid fever he uses an aqueous solution of the strength of one per cent., first washing the sore well, and then covering it with lint soaked in this liquid. He says its effect is remarkable: the sloughing, atonic region taking on a healthy aspect, granulating, discharging less, and proceeding rapidly to a cure. When there is offensive suppuration he uses a mixture of chloral and eucalyptus.

MISCELLANY.

EAU DE COLOGNE.—

"BOSTON, February 14, 1874.

"MESSRS. EDITORS,—The other day, while looking through the medical pamphlets preserved in our City Library, I came across an advertising circular entitled '*Vertus et Effets de l'excellente Eau admirable, ou Eau de Cologne*, approuvée par la Faculté de Médecine, le 13 Janvier, 1727;' from this I learned what was quite novel to me—that eau de Cologne was originally concocted for a quack medicine. In the circular, which in type, paper, and language bears evidence of belonging to the last century, it is stated that this water was invented by an Italian, Sig. Paul Feminis, an old distiller of Cologne.

"It is described as a 'volatile spirit, extracted from the rarest and most delicate simples; an elixir which has the power of restoring the parts of the body that are attacked by any disease, or predisposition to the

same, of fortifying and re-establishing their natural functions, of insinuating into them a moderate and living warmth, which, sympathizing with their own, reanimates their vital forces, aids the coctions, and forcibly expels all the excrements.'

"The sheet ends with the usual

"'Caution.

"'It is undisputed that the Sr. Paul Feminis, inventor and author of the Eau admirable de Cologne, before dying, left his secret and the composition solely to Jean Antoine Farina, who notifies and cautions the public that Eau de Cologne, which is made and sold under any other name whatsoever, is neither of the quality nor the composition of that invented by the originator. The present owner, therefore, as the sole successor and inheritor of the said secret, making the only veritable Eau de Cologne, gives notice besides that every other brand is wanting in the good effects pertaining to that of the above said author, whose successor is Jean Antoine Farina, distiller at the sign of the City of Milan, Golden Scales Street, Cologne.'

"Yours very truly,

"JAMES R. CHADWICK, M.D."

—*Boston Medical and Surgical Journal*.

CELEBRATION OF ROKITANSKY'S BIRTHDAY.—The seventieth anniversary of the birthday of this distinguished pathologist was celebrated with appropriate ceremonies in Vienna on the 19th of February of this year. Delegations from all parts of the Austrian Empire, and also from many foreign lands, were present and took part in the festivities, and good wishes were sent by post and telegraph from numerous societies and eminent individuals who were unable to be personally represented. Long before the time appointed for the exercises to begin, the hall appropriated to the purpose was crowded by men whose names are of world-wide renown in science and literature, and who hastened to do homage to the distinguished professor. Prof. Langee delivered an oration, narrating the various services which Rokitansky has rendered towards the advancement of science, and, at the close of his address, unveiled a bust which his pupils had had made as a testimony of their earnest wish to hand down to posterity the features of one whom they so heartily revered. Numerous other addresses were made, and forty deputations presented their congratulations. In the evening there was a torch-light procession by the students of the various faculties of the University, from the Parliament House to the "Kursalon" in the "Stadt-park," where they were received by Rokitansky. Forming a circle around the building, they sang the "Gaudeamus," then resumed their march and extinguished their torches, and the birthday celebration was over.

NEVADA SODA.—A small lake in Churchill County, Nevada, covering an area of seven acres, is a perfect well of carbonate of soda in its almost pure state. Twenty thousand tons a year can be obtained from it. It is pronounced by chemists equal to the European soda.—*Druggist's Circular*.

THE Jardin d'Acclimatation at Paris recently received a medusa polyp, which on the day after its entry into the pool assigned to it had created a void around it and skilfully got rid of all its neighbors. This was a mystery until the water of the pool was analyzed: the water was found to be converted into a solution of vinegar, and it was apparent that it was one of those very rare molluscs, the vinegar polyp, whose body when plunged into pure water gives presently a strongly characterized acetic solution. The working of this animal is very curious; it produces alcohol, which it transforms into vinegar. The poisonous mollusc was, of course, quickly withdrawn, and placed in clarified vinegar in a closed jar, where it will pursue undisturbed the economical manufacture of the acid.

CAUTION TO DRUGGISTS.—A mixture of chromic acid and glycerin is a formula which has recently been highly recommended in certain affections of the mouth, scrofula, etc. Dr. Mascarel takes occasion to warn druggists that when these two substances are vigorously rubbed up together the result is a lively *explosion*, an accident which can be averted by adding the glycerin drop by drop, and grinding slowly.—*Il Raccogliore Medico*, No. xxxi., 1873.—*Boston Medical and Surgical Journal*.

DR. BALLE presented the other day to the Faculté de Médecine a young girl aged fourteen, named Blanche Dumas, from Issoudun, whose body, from the waist downwards, is double,—the two parts acting independently of each other. The two legs she uses for walking belong each to a different trunk, while a third one is quite insensible to pain. Her health is good.—*London Lancet*.

AFTER a prolonged debate, the Obstetrical Society of London have decided, by an overwhelming vote, that their by-laws did not allow of the admission of women as members. This interpretation of the by-laws seems to have resulted from the feeling expressed by several speakers that the admission of women would be ruinous to the Society.

THE death of Dr. Ernst Bock, pathologist to the General Hospital at Munich, in the 65th year of his age, is announced. He was the author of several works upon simple and pathological anatomy, but is specially known in Germany by his "Buch vom gesunden und kranken Menschen," and numerous other popular writings.

THE *Chicago Post and Mail* gives the following as the immediate cost of a first-class baby: physician, \$50; midwife, \$25; wet-nurse, \$50; dry-nurse (one year), \$150; clothing, \$200; baby-carriage, \$25; total, \$500.—*The Clinic*.

THE *London Lancet* deems the introduction of Pullman palace cars into England of sufficient importance to receive an editorial notice.

THE Worcester Press thinks that an *Eng* raving would most appropriately represent the scene of Chang's death.

THERE was a certain Pope who lost his physician, and to all who applied for the office he put the question, "How many have you killed?" Each doctor in turn solemnly asseverated that he had never killed any one. An old fellow, with a big beard, came at last. "How many have you killed?" asked the Pope. "*Tot quot*," said the old fellow, pulling his beard with both hands. The Pope was pleased with the confession, and, believing that he must at least be a man with an enormous experience, took him as his physician.

USE OF GLAZIER'S PUTTY IN SURGERY.—Ordinary mixed putty has been found by Mr. Courvall to be the softest and most applicable means of treating excrescences or tumors of various kinds where compression is desired, as it moulds itself so neatly to the skin. He believes it to be superior to dextrine, silicate of soda, or plaster bandages. It is a cheap and always attainable material.—*The Medical Press and Circular*.

THE motto for the successful essay for the Merritt cash prize, awarded by the New York State Medical Association, probably had more of truth than poetry in it. It was "Die Hoffnung eines armen bedürftigen Teufel,"—The hope of a poor needy devil.

PROF. ROKITANSKY is stated to have four sons, two of them—Karl and Prokop—rising young physicians and "Universitäts-docenten," one, Hans, a basso of the Imperial Opera at Vienna, and Victor a teacher of vocal music.

DR. WILSON FOX has been appointed Physician-in-Ordinary to their Royal Highnesses the Duke and Duchess of Edinburgh, the much-talked-of bridal pair.—*Boston Medical and Surgical Journal*.

THE London Dental Hospital has recently occupied its new building, and seems to be entering upon a career of renewed usefulness.

NOTES AND QUERIES.

TO THE EDITOR OF THE PHILADELPHIA MEDICAL TIMES:

SIR,—Allow me a short space in your journal in reply to Messrs. X and Ex.

X may be dismissed in a very few words. Unable to cope with the *matter* of my communication, he has attacked the *manner*. His elegant Lord Dundrearyship's nostrils seem to be much disgusted at my want of "suave manners and courtly language," and he very consistently makes the asinine assertion that, if the dispensary-doctors do serve for nothing, it is for nothing "*save for self-interest*."

In marked contrast are the courtesy and convincing arguments of Ex. I did not mean to assert that hospitals and such-like institutions were destined to crush not only the struggling practitioner but to embarrass the whole medical profession, but intended to denounce their indiscriminate advice and their services to any who may demand them without question. Surely there are enough *deserving* poor in such a large city from whom to gain experience (for self-interest), without taking in those "of low degree" who may be able to pay but desire to shirk an honorable responsibility.

I cheerfully accord the high ability and great services of hospital-doctors, but am not on that account willing to allow them privileges not accorded to the humblest member of the profession. I readily assent to the usefulness and great charity of the institutions themselves when properly administered, but not that they shall be vehicles for the advancement of a few for their own selfish interests, and thus prove themselves like the fabled dog in the manger, allowing no one else to be partaker of the feast.

VERTEX.

SATURDAY, APRIL 4, 1874.

ORIGINAL COMMUNICATIONS.

FETID CORYZA.

BY J. SOLIS COHEN, M.D.,

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THE term *fetid coryza* appears to me better adapted than *ozæna* to designate the condition under consideration, though merely indicating a combination of characteristic symptoms—*discharge and odor*—attending disease involving the nasal passages, without defining its nature.

Fetid coryza is produced by various affections. It may be due to ulceration of the mucous membrane of the nasal passages or of the sinuses communicating with them, whether erythematous, catarrhal, glandulous, scrofulous, syphilitic, lupoid, or cancerous. It may be due to destructive disease of the bones or cartilages of the nasal organs, or of their periosteum or perichondrium; whether the disease be idiopathic, traumatic, or specific. It may be due to the development of adventitious growths in the nasal structures themselves, or in others contiguous to them. It may be due to the deposition of calcareous matters from the secretions, and their aggregation into rhinoliths or nasal calculi. It may be due to the retention of some external foreign body, introduced by design or accident, and to the inflammatory processes resulting therefrom. It may be due to some unfortunate individual or family idiosyncrasy without any ulceration whatever, and even with little inflammation or none at all. It may be due simply to retention of nasal excreta and their decomposition *in situ*.

We have, therefore, to interrogate the part and the system in order to make a satisfactory diagnosis as to the cause of the discharge in any given case, and to form a judgment as to the proper method of treatment.

In order to examine the parts they must be washed out as thoroughly as possible by the use of the nasal douche, and syringes introduced anteriorly and posteriorly into the nasal passages; the best substance in general being tepid water impregnated with table-salt—a drachm to the pint. If this fails to detach the secretions, the phosphates of ammonia and soda or the carbonates of soda and potassa may prove more efficient in like proportion. Sometimes the forceps or the sponge-mop may be used to detach matters within their reach. In order to make a thorough examination of the parts, it is necessary that they be thoroughly cleansed. After the parts have been cleansed they can be examined before a strong light,—anteriorly by drawing the *alæ* aside so as to dilate the passage, or by introducing a speculum; and posteriorly with the rhinoscope. In this way we observe the appearance and condition of the mucous membrane, detect swelling, ulceration, retained secretions, foreign bodies, and morbid growths, exposed cartilage or bone,

etc. The tortuous contour of the turbinated bones and nasal meatuses renders it impossible to examine these structures in their entire extent; but still, under a good light, they can be explored pretty thoroughly, especially with the aid of probes bent so as to admit of application to the surfaces of the various parts, on the same principle employed by the dentist in exploring the tortuous recesses in a carious tooth. Rhinoscopic inspection enables us to examine, in addition, the condition of the glandular tissue at the roof of the pharynx, a structure very frequently implicated in diseases giving rise to the discharge under consideration.

In some cases of fetid catarrh, the bones and cartilages of the nose, as far as their condition can be examined, appear healthy; and no ulceration of the mucous membrane can be detected on inspection anteriorly or posteriorly. There seems to be some constitutional idiosyncrasy in these cases, in consequence of which, retained portions of the nasal secretions undergo desiccation, and remain impacted in some portion of the sinuosities of the nasal passages; there undergoing decomposition. This condition of system has been compared to that which is attended by the peculiar, offensive smell of the cutaneous perspiration from the feet and armpits of certain individuals who cannot rid themselves of their unpleasant odor even by the most scrupulous ablution. In these idiosyncratic cases the discharge is by no means profuse, unless in exceptional instances. Sometimes, indeed, it is quite scanty; but it manifests a disposition to become desiccated into thin scales or crusts, removable only with more or less difficulty: sometimes by way of the nostrils anteriorly, and sometimes by a sort of inspiratory nasal screatus, which, after repeated efforts, forces them through the posterior nasal outlets into the pharynx, whence they are expectorated. These crusts usually emit a horrible stench, perceptible at a distance of several feet, and capable of impregnating a large room with their fetor.

All that can be effectually accomplished in the way of treatment in these cases, seems to be the promotion and maintenance of an active condition of the secretory functions of the skin and kidneys by frequent bathing and copious water-drinking,—keeping up a sort of sewerage, as it were,—and the thorough and efficient cleansing of the parts several times a day, especially at night and morning; making this act a constituent and essential part of the daily toilet, as much so as the use of the tooth-brush or the wash-basin. For this purpose the nasal douche of Thudichum, or some modification of it, is the best contrivance in most instances; but if the crusts are hard to remove, the use of the pharyngeal nasal syringe and of the continuous rubber hand-bellows syringe will afford better results; the latter especially in those cases in which crusts moulded to the contour of the posterior nasal outlet are apt to accumulate, and to dislodge which, readily, a stream of fluid entering with some force from the front is requisite. The ordinary solution of table-salt—a drachm or two to the pint of

tepid water—fulfils the requirements of the douche for cleansing-purposes; and detachment of the crusts is facilitated by the substitution or addition, as may prove most appropriate, of equal quantities of alkalines, such as the carbonate or bicarbonate of soda, phosphate of soda, and the like. At least a quart of the cleansing solution should course through the nasal tract at each night and morning ablution; part of it started through one nostril, and the remainder through the other. After the parts have been cleansed, the douche should again be used, containing a disinfectant in tepid solution. Permanganate of potassa, chlorinated soda, carbolic acid, and so on, employed in this manner, will, in great measure, control the fetid odor of the secretions.

Various local applications are made at times for the purpose of altering the nutrition of the mucous membrane, in the secretion of the glands of which, the diseased action is supposed to reside. For this purpose various preparations of mercury and of iodine, the terebinthines, muriate of ammonia, etc., have been employed in the forms of ointment, powder, solution, and vapor; but, at least in the hands of the writer, they have proved of only questionable benefit.

Local cleansing, with disinfectant detergent douches immediately afterwards, and the maintenance of the cutaneous and urinary secretions by appropriate remedies, have rendered good service; but, to be efficient, resort to these measures must be constant.

Fortunately, in this variety of fetid coryza, the affection, whatever its real nature, moderates in severity as the patient becomes older, so that by middle adult life it has subsided entirely, or in great measure. It is a long while to await permanent relief, to be sure, but it is better than no prospect of cure.

Another form of fetid coryza, attended with certain local manifestations to be described farther on, is engrafted upon the strumous diathesis; and this variety, from its persistence, and from its ultimate destructive results,—which, when very extensive and insufficiently attended to, resemble so much the effects of analogous conditions in constitutional syphilis,—seems to contribute some force to the doctrine that scrofula is but an inheritance of syphilis; modified, it is true, but bearing a relation to that virus similar to that which some authors trace between varicella and variola.

These cases usually originate in an acute coryza or catarrh, the result of exposure to cold. This catarrh gradually becomes chronic, the attendant discharge more or less profuse, varying in color and consistence, being at one time muco-purulent, at another purulent, sometimes sanguinolent, and so on. The odor of the discharge is exceedingly offensive, and there is a permanently unpleasant odor of the patient's breath, rendering propinquity to the individual very disagreeable.

In these cases crusts of inspissated mucus accumulate at the outlets of the posterior nares from detention there of the secretions, and they often become moulded to the form of the opening, pre-

senting, when discharged, a peculiar honeycomb-like configuration. These moulds are usually several days concreting, and become discharged perhaps once or twice a week, sometimes oftener, sometimes less frequently. When discharged at long intervals, small, dense clumps of irregular conformation, and of similar constituents, will be occasionally drawn into the throat by forced nasal inspiration, and be then expectorated. These will possess the characteristic odor. Sometimes small caseous-like concretions will be hawked down, apparently from the glandular tissue at the nasal portion of the roof of the pharynx, similar in appearance to the analogous matters sometimes discharged from the tonsils, and, like them, of an intolerable stench when crushed. In some instances, desiccated crusts can be seen upon the glandular masses at the roof of the pharynx, on pharyngo-rhinoscopic inspection. When examined immediately after spontaneous or artificial removal of the crusts, this glandular tissue is seen to be spongy, and, if the removal has been forcible, is most likely to bear decided evidence of hemorrhage. Pain will be complained of in the parts and will be referred especially to the region of the frontal sinuses.

This form of disease of the nasal passages is met with in all classes of society: in the robust individual no less than in the delicate one; in those who have been tenderly reared, and in those who have been brought up in the roughest manner. It may make its appearance at any age, but seems to be most frequently noticed for the first time about the period of the second dentition. Most of the patients I have seen have been girls from six or eight years of age upwards to confirmed puberty or early adult life.

If, after thorough cleansing with the douche, syringe, or forceps, the parts are carefully examined,—anteriorly by the aid of hook, probe, dilator, or speculum, and posteriorly by the rhinoscopic mirror,—some points of ulceration, superficial or deep-seated, will usually be detected upon the mucous membrane. These ulcerated spots may occupy the free surface of the turbinated bones, or the lower region of the septum; and even when ulceration cannot be discovered in these situations it is often fair to infer that it is likely to exist upon some portions of the turbinated bones altogether out of the field of direct or indirect vision. The nasal mucous membrane will be swollen, often to such a degree as to occlude the passage at one or more points; in some instances the result of sero-fibrinous or fibrinous infiltration into the submucous connective tissue; in others, the result, in addition, of actual hypertrophy of this tissue. In some cases little bags of thickened tissue or exuberant folds project from the walls and are sometimes mistaken for neoplasms. The parts are usually very much congested, though they do not bleed as a rule, except upon rough manipulation; and they are very sensitive to contact with the probe in some instances, and not at all so in others. The mucous membrane of the posterior portion of the septum is often seen by the rhinoscope, pushed off from its sides by submucous infiltration, bulging into the free space of the nasal

outlets so as to present much the appearance of turbid morbid growths.

As a matter of course, in this condition, the patient will experience more or less difficulty of nasal respiration; one nostril or the other, in many instances, being impervious to air, nearly all the time. This induces a habit of keeping the teeth slightly apart to facilitate breathing, and favors the formation of chronic pharyngitis; a condition which is often coincident to all the affections under consideration.

If the disease has existed for a number of years—and it is essentially chronic—the ulcerations will have extended beyond the limits of the tissue proper of the mucous membrane, and will have involved the cartilages and the bones, portions of which will sometimes have been destroyed, and have been discharged spontaneously; so that the cartilaginous septum is in many instances found to have been pierced through, sometimes in one or two small perforations, but more frequently in a single large, irregular hole, perhaps admitting the end of the little finger, or the end of a larger one, and looking as if it had been gouged out with some rude tool. In some instances, one or more of the turbinated bones, usually the middle one, will be necrosed and bare in its entire extent, or the greater portion of it, awaiting its extraction,—an operation readily accomplished with polyp-forceps. Sometimes it has been removed spontaneously, or has been pulled out by the patient, leaving a large, free space in the nostril, through which the posterior wall of the pharynx can be seen, or a portion of the upper surface of the velum. In some instances the destructive inflammation will have progressed to a farther extent, and have involved portions of the superior maxillary bone, from which copious accumulations of fetid pus and necrotic particles will have been discharged at intervals. Cases of this kind will have produced some alteration in the external configuration of the parts, the nose being sunk in or flattened out, and the nostrils distended. In some instances the orifices of one or more sinuses will be recognized, the tracks of which cannot be readily traced, perhaps because they course around the scroll of the turbinated bone. From these openings, on pressure behind them with a probe, a few drops of creamy pus can often be discharged.

Some other evidence of the strumous diathesis is usually apparent.

In cases of undoubted syphilitic origin,—and the distinction between scrofulous and syphilitic coryza is not always well marked,—the involvement of bony structures will progress to a much greater extent than has already been described, the earlier manifestations having been similar to those of catarrhal and scrofulous inflammation, but more active. The turbinated bones, the vomer, the nasal bones, the palate bones, the lachrymal bones, the sphenoid, and the ethmoid, will often undergo more or less destruction. In some instances pharyngeal rhinoscopy and the use of the probe will early reveal necrosis of the vomer, the sphenoid, and the basilar process of the occipital bone. The dis-

charge in these cases is not, as a rule, so offensive in odor as in the scrofulous cases; but it is equally persistent, and will continue as long as any dead bone remains undischarged. The tortuous contour of the nasal passages and the sinuses leading to them is such as to render it impossible in many instances to remove all of this dead bone by surgical interference through the nostrils anteriorly or posteriorly; so that its discharge must be awaited bit by bit. The amount of destruction that the parts may undergo under such circumstances is enormous. In some instances the cranial vault has been pierced, and the resulting meningitis has put an end to the complaint and to the patient.

The amount of the discharge, its consistence, and the intensity of its disagreeable odor, will vary during the course of a fetid coryza, whatever may have been its origin. An inflammation of the parts such as follows a cold, a determination of blood to the head, over-work, the approach of the menstrual flux, all seem to increase the offensiveness of the discharge. This will become moderated after cleansing with the douche, and the application of remedies; but will wax just as bad as ever in a few hours, or a few days. When there is an involvement of bone, or a fresh involvement of bone, the fetor will be increased until the necrosed portion has become exfoliated and discharged.

The patient is usually cognizant of his extremely unpleasant condition to a certain extent, but is unaware of the full amount of stench emitted from his body, because the sense of smell is obtunded, and in some instances entirely destroyed. With the loss of smell there is, in consequence, more or less loss of the sense of taste; so much of it as is dependent on the sense of smell. In those cases in which the frontal and maxillary sinuses are affected to a greater extent than the nasal passages, the patient is better able to appreciate his infirmity, for the sense of smell is still conserved to a considerable degree. The offensiveness of the odor in extreme cases is beyond description, and must be felt to be comprehended. It will impregnate a room for hours, and deter the practitioner from persisting in proper efforts to relieve the local condition.

(To be continued.)

A CASE OF EXTRA-UTERINE PREGNANCY.

BY GEORGE STILES, M.D.,

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I WAS called, on the evening of September 4, 1870, to see Mrs. V., aged 31 years, mother of one child, which was born when she was 21 years of age. She complained of an acute pain, of a pulsating or throbbing character, in the right lower part of abdomen. Her menses, which should have appeared on the 31st of August, had not taken place; and she had been suffering from vague abdominal pains for some three weeks previously. Upon inquiry, I ascertained that she was experiencing morning-sickness, and that her mammae afforded the usual rational signs of commencing pregnancy. From conversation with herself and husband, and

from the evidences of these signs, I concluded that she was about one month gone in pregnancy. I administered the ordinary remedies to relieve her pain and nausea, but with very partial effect; and from that time I was compelled to visit her two or more times daily, in consequence of her very great and continued suffering; to relieve which it was absolutely necessary to employ anodynes in various doses and of various kinds, such as morphia hypodermically, with morphia, opium, hyoscyamus, belladonna, and various other narcotics and anodynes, both by stomach and rectum.

On the morning of the 1st of December I was sent for, and informed that she was threatened with a miscarriage. On examination, I found the mouth of the uterus closed, but that blood was escaping freely from its cavity; her pulse was 126; the abdomen tympanitic; extremities cold; her face ghastly pale; no nausea. Concluding that all hope of saving the ovum was gone, I gave a full dose of fluid extract of ergot, and in a few hours the hemorrhage entirely ceased. In a few hours later, however, she was seized with intense pain in the abdomen, uncontrollable vomiting, and all the symptoms of acute and violent peritonitis. Pulse 120; her abdomen enormously swollen, and sensitive to touch; constant vomiting; bowels obstinately constipated; the bladder had to be emptied by the use of the catheter. So grave were the symptoms that I thought she would die. The main treatment consisted in giving enormous doses of opium by the rectum, and the application of ice to the abdomen. At the end of three days she was decidedly better; pulse diminished in frequency; stomach retained small quantities of suitable food; bladder acted spontaneously, and the bowels were finally moved (after repeated failures by other purgatives) by a dose of oleum tiglii. Five days later, all the symptoms returning with all their original severity, Dr. Hiram Corson was called in consultation, who, after a careful examination finding the uterus in its normal position, but somewhat enlarged, and detecting no other local signs of pregnancy, expressed it as his belief, from the history of the case, that she was pregnant, but that her sufferings came more from a highly hysterical condition than from anything else; and suggested the disuse of anodynes, and the substitution of quinia, three times daily, with ice applied externally to the abdomen. This treatment was continued for two or three days, when the pain in her abdomen became so excessive that it was absolutely necessary to return to larger doses of anodynes than ever, with the aid of which it was with great difficulty that sleep could be produced, or any relief could be obtained.

For the next three weeks her symptoms were of the gravest and most urgent character. Abdominal pain intense, only relieved imperfectly by enormous doses of anodynes; her nausea so unremitting that life could only be sustained by milk and beef-essence, administered by rectum; her pulse feeble, and always over 100; belly tympanitic and excessively tender; the bowels constipated.

In the month of January, 1871, I made the following notes of the case:

January 6.—Mrs. V. spent a terrible night, but this morning is somewhat easier; has slept nearly all day.

January 8.—Passed a better night. Bowels spontaneously moved this morning; pulse 110; skin moist and quite cool; complains of nausea after taking food.

January 12.—Much better this morning than for a long while. Bowels moved daily since the 8th inst.; takes food kindly; pulse 100.

January 26.—Up to this time Mrs. V. has been steadily improving; to-day sat up in her room for four consecutive hours; eats heartily; daily evacuations from bowels; sleeps well at night; pulse 90.

January 29.—Mrs. V. came down-stairs yesterday for the first time; thinks she is able to look after her household duties; a good appetite; functions apparently all normal. From this time I discontinued my visits.

On the 6th of February she visited an uncle in Philadelphia, and appeared in good health.

On the 7th I was called to see her. She had reached her home in great suffering, and from this time her symptoms became very grave; the abdomen was as much enlarged as is usual at the end of the eighth month of gestation, and exceedingly sensitive to the touch. Her pulse remained at about 120; her nausea was constant, and all food was almost instantly vomited; her abdominal pain was so severe that the largest doses of anodynes gave but little relief,—the usual quantity being as much as nine grains of opium in twenty-four hours, or one and a half grains of morphia.

As she was becoming exceedingly emaciated, I began to entertain grave doubts of a normal pregnancy; and on the 26th of March, 1871, I called in consultation Professor Penrose, of the University of Pennsylvania. She then presented the following appearance and condition: Face pale and haggard; mind somewhat disposed to wander; pulse 120, and feeble; hands cold; abdomen very much distended, and so sensitive that it was a matter of discussion whether she should not be etherized, so that a more thorough exploration could be made. Palpating the abdomen, a tumor was easily recognized, about the size of the uterus at the beginning of the eighth month of pregnancy, and in the median line, while above and on either side of the tumor the sound of percussion was very tympanitic. This tumor was firmer and harder than the pregnant uterus, and appeared of uniform consistence.

A vaginal examination revealed the mouth of the uterus carried close against the symphysis pubis; the cervix somewhat softened, and admitting the index-finger an inch. From the posterior lip of the uterus, and directly continuous with it, could be traced a firm, hard tumor, which filled the whole of the upper part of the pelvic cavity, and seemed to be part of the abdominal tumor dipping into the pelvis. This mass was as firm and hard as a fibroid growth, and *ballotement* could detect no movable body in or above it. A most careful exploration of the abdomen revealed no sound of foetal heart or of foetal movements.

Dr. Penrose considered the case a very obscure one. That the enlargement was not caused by a natural pregnancy he considered almost certain, in

consequence of the density of the tumor, the absence of the foetal heart-sounds, as well as of the signs furnished by the active and passive movements of the child; and, besides all these, the very singular position of the os uteri, close to the symphysis pubis, is never met with in normal gestation. But then, on the other hand, there had been menstrual suppression for seven months, while in the beginning of the case there had been morning-sickness and the early mammary alteration characteristic of pregnancy; and now here was an abdominal tumor in the position and of the size usual at or about the end of seven months.

Dr. Penrose suggested the probability of an extra-uterine pregnancy, and referred to a case the history of which had been recently sent him from North Carolina, in which some of the conditions, especially the very singular one of the position of the os uteri, resembled those furnished in the present instance; but in this case the foetal heart-sounds and foetal movements could be distinctly recognized, while here there were no heart-sounds, no foetal movements.

Dr. Penrose thought that there might be some growth—possibly malignant—which had caused the rapid enlargement and terrible suffering. He had no hesitation, however, in giving his opinion that, as the case was so obscure, it was barely possible that pregnancy might exist, and hence no active interference ought to be attempted until after the full period of gestation, and the only treatment to be pursued was that which she had been receiving—viz., rest, anodynes, nourishment. When the patient's husband requested the Professor's prognosis, he said that he considered the woman so ill that he believed she would die before the full period of gestation was reached, and requested, should death take place as he expected, that a post-mortem examination should be made. Ten days later some relatives of the family requested that Dr. Washington Atlee, of Philadelphia, should be called to see her. After a hurried examination, Dr. Atlee expressed it as his opinion that she was either pregnant or suffering from ovarian tumor; that the pain in the abdomen was hysterical; that she was not so seriously ill as Professor Penrose stated, but that she would certainly live for some months, and probably get well. He differed from Professor Penrose as to treatment, recommending exercise, abstinence from anodynes, and that her mind should be educated to look upon her sufferings as the result of a hysterical fancy. From this time until her death, which occurred three days after Dr. Atlee's visit, her symptoms increased in severity; she became constantly delirious, with vomiting, and uncontrollable pain. Forty-eight hours before death, suddenly, copious evacuations of altered blood with traces of pus were passed from the rectum, amounting in quantity by measure to one-half a gallon; and from this time she rapidly sank, dying on the morning of the 7th of April, 1871. On the evening of the 8th of April, a post-mortem examination was made by Professor Penrose and myself. On cutting through the abdominal walls it was found that the whole peritoneal cavity had been

entirely obliterated by universal peritonitis, which peritonitis had evidently lasted for a long time,—doubtless since the attack in December previous. So firm were these peritoneal adhesions that the knife could be used only with great care, and the contents of the abdominal cavity had to be separated from the walls by tearing with the fingers. After some time the whole mass of abdominal contents was removed, and not until then was the nature of the enlargement recognized. The case had been one of extra-uterine pregnancy; the cyst had ruptured and had discharged its contents into the peritoneal cavity months previous to death,—doubtless at the time of the sudden hemorrhage and acute peritonitis in December. The dead foetus, about four months old, thoroughly softened and macerated, was found surrounded by coagulated blood with some pus, and the whole encysted in a cavity, the walls of which were formed by the hardened and thickened adjacent surfaces. The relative positions of the various component parts of this mysterious abdominal growth were as follows. In front was the uterus, enlarged, as will be seen by the description, its cavity empty. Behind the uterus, and forming the hard fibrous projection into the pelvic cavity which had seemed to the touch, before death, to be part of the posterior uterine wall and to be continuous with the posterior lip of the uterus, was an oval mass of solidified blood, appearing, after removal from its position, as large as, and somewhat the shape of, an ostrich egg. Above this hard oval mass of solidified blood was the body of the foetus, its head directed towards the posterior part of the right iliac fossa, the breech to the left iliac fossa, while above and around the foetus were coagulated blood and pus.

This mass of abnormal structures was carefully removed, and sent by Professor Penrose to Dr. W. F. Jenks, an eminent accoucheur of Philadelphia, for a microscopical examination, with the following result:

The bladder was contracted. An incision which was made with the intention of dividing the anterior wall of the uterus, opened a cavity about the size of an orange, the anterior wall of which was formed by the abdominal walls and the fundus of the bladder, while the enlarged uterus and right broad ligament formed the posterior boundary. This sac communicated by ragged ulcerated openings with a cavity which subsequently proved to be the distended right Fallopian tube. The lower portion of the peritoneum, which formed the lining membrane, was discolored by old hemorrhagic effusions. The contents had mostly escaped; there remained, however, a small amount of a dark, opaque, brownish fluid.

The uterus was six inches in length, three inches in breadth, its walls three-fourths of an inch in thickness. The mucous membrane was thickened and injected. It was impossible to trace the left Fallopian tube. The lumen of the right tube was occluded a short distance from the internal orifice. By forcing the sound through this obstruction it passed into a sac with irregular jagged edges, below which the right round ligament was traced, and beyond it to the right the ovary was recognized, showing that the walls of this cavity, which were about one-eighth of an inch in thickness, were formed by the distended Fallopian tube. The left ovary was small, but normal. The right ovary was

reduced to a thin, flattened plane of fibrous tissue, containing a number of Graafian follicles which had undergone cystic degeneration.

These structures—viz., the posterior wall of the uterus, the right and left broad ligaments, and the remains of the ruptured sac, formed by the left Fallopian tube—constituted the anterior wall of a large cavity, which was bounded in all other directions by the small intestines and rectum, which were glued together by peritoneal inflammation. The walls of this sac were one-fourth of an inch in thickness, and consisted of layers of lymph, discolored by old hemorrhages. Its contents had been removed at the post-mortem examination.

Diagnosis.—Right tubal pregnancy; rupture of the sac at the third month; general peritonitis, resulting in the formation of a secondary sac around the foetus.

THE RESONANT FUNCTIONS OF THE EXTERNAL EAR.

BY CHARLES H. BURNETT, M.D.,

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IN a recent number of this journal (October 4, 1873) I alluded to certain phenomena of resonance which I had observed in connection with the external ear, but I did not venture beyond the simple description of these phenomena and a localization of them in various parts of the external ear. It is my intention in this article to give an explanation of the physical causes of the *resonant functions* of the external ear, referred to at that time (*loc. cit.*); and under the term external ear I shall include the meatus auditorius externus, and auricle, or pinna.

The auricle, in combination with the meatus auditorius, forms a resonator of a more or less conical shape, closed at the bottom by the membrana tympani, the special function of which is to strengthen by resonance those waves of sound which possess a short wave-length.

Let the accompanying diagram represent a section of the external ear, from the membrana tym-

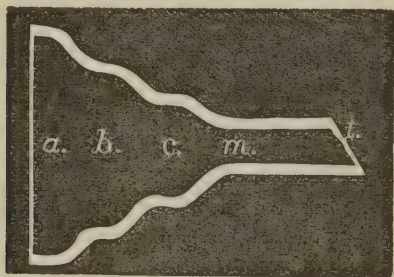


DIAGRAM REPRESENTING THE TOPOGRAPHICAL RELATION OF THE COMPONENT RESONANT CAVITIES OF THE EXTERNAL EAR.

a., fossa of helix; *b.*, fossa of antihelix; *c.*, concha; *m.*, meatus auditorius externus; *t.*, membrana tympani.

pani to the helix. The section is made from above downwards, parallel to the long axis of the meatus auditorius externus, and gives an ideal representation of the manner in which the resonator we shall consider is built up by the auditory canal and the successive columns or cups of air, represented by the concha and fossæ of helix and antihelix.

The widest diameter of this resonant cone or funnel, or miniature "speaking-trumpet," *i.e.*, the diameter obtained when the helix and lobe are made to approach each other about the opening of the external meatus as a common centre, does not exceed the wave-length of the note to which the resonator thus formed will respond. In order fully to understand how this resonant power is maintained by the external ear, and to sound-waves of what length it specially resounds, let us first consider the resonance of the meatus auditorius externus, and the physical reasons for such a function in it.

We know that the external auditory meatus resounds to the notes e^{iv} to g^{iv} (Helmholtz's *Tonempfindungen*, p. 175, 1870), and we also know that the column of air which most easily resounds to any given note is equal to one-fourth of the length of the wave of sound produced by that note (Tyndall "On Sound," p. 174, 1869). Now, the wave-length is found by dividing the velocity of sound per second by the number of vibrations executed by the sounding body per second (Tyndall, *op. cit.*, p. 84), and the quarter of the result of this division, *i.e.*, the quarter of the wave-length, will equal the length of the column of air which will act the part of a resonator for the note producing the sound-wave.

In order to appreciate this fact, let us work out a simple problem in physics, with the data before us, as follows. As already stated, the notes e^{iv} to g^{iv} have 2640 to 3168 vibrations per second, and the velocity of sound in atmosphere at 15° C. is equal to 1122 feet per second. Therefore, the length of the wave produced by the note of 3168 vibrations per second will be found by dividing 1122 by 3168. The answer will be, about three-eighths of a foot, or four and a half inches.

Now, the column of air which will resound to the note producing a wave of that length is equal to one-fourth of that wave-length, or one and one-eighth inches, which is just the short average length of the meatus auditorius externus. Some authorities give one and one-fourth inches as the average length of the meatus auditorius externus, but practically the normal human meatus has various lengths, passing gradually from the meatus proper into the concha; and this brings us to the second consideration connected with the phenomena of resonance manifested by the external ear, viz., that as the pitch of a note, let us say of e^{iv} or g^{iv} , falls, the wave-length must become greater, or, in other words, as the number of vibrations per second diminishes, the wave-length increases; which is but the enunciation of a common law of physics. It is now manifest that the column of air contained by the meatus auditorius externus will not be long enough to act as a resonator for waves of sound the quarter of which is represented by one and three-fourths to two inches.

Therefore, we find the concha superposed by nature upon the external auditory meatus, in order to lengthen it. We have already seen by experiments last summer that the notes which resound to the column of air represented by the concha, *i.e.*, the concha in conjunction with the meatus auditorius

externus, are lower than those which resound to the external auditory meatus when it is made to act alone, which we can accomplish by pushing the concha out of place by firm pressure of it against the head. The reason for this becomes very clear when we reflect that a note lower than those represented in the scale from e^{iv} to g^{iv} must have a greater wave-length, and therefore it requires a longer column of air as a resonator. If this lower note should fall in the octave below those notes already mentioned, the addition of the column of air in the concha to that of the meatus would supply the resonator.

If to this resonator, composed of meatus and concha, we add the fossæ of the antihelix and helix, we of course obtain longer or deeper resonating columns of air; and I know from my experiments that notes of still greater wave-lengths than those alluded to resound to the column of air represented by that contained in the fossæ of the auricle added to that of the concha and meatus auditorius externus.

By holding the hand behind or around the ear, we have the power of adding a still deeper column of air and its resonance to that of the external ear. Hence, the deaf person involuntarily places his hand to his ear, to increase, by resonance, the ordinary sound falling upon it. His hearing is thus strengthened, especially for those notes of high pitch and short wave-length to which the human voice owes its peculiar timbre or clang-tint. "It is indeed remarkable that the human voice should be so rich in over-tones (Obertöne), for which the human ear is so sensitive." (Helmholtz's *Tonempfindungen*, p. 176, 1870.) When the wave-length increases, as it does when the note becomes still lower than any of those alluded to, the resonance of the external ear ceases to exert any marked influence on the fundamental note. In such a case it is probable that the resonance of the room or street in which we are placed is aroused by the longer wave of sound; but nature has supplied us, in the external ear, with an ever-present and delicate resonator for just those notes of short wave-length in which the human voice is so rich and to which it owes its special timbre.

I would like to state here that these phenomena of resonance peculiar to the external ear were communicated by me to my friend Dr. A. H. Buck, of New York City, shortly after I had observed them last summer, and that, during the hours of travel which we spent together, the experiments were performed by him upon his own ear, with a verification of them satisfactory alike to him and to me.

We may, therefore, conclude that the external ear (*i.e.*, the meatus auditorius externus and the auricle) forms a resonator for those tones having wave-lengths the quarters of which are represented by the various depths of the column of air contained by the external ear.

The various interesting questions concerning the resonance of isolated portions of the auricle—*i.e.*, of the fossæ—when acting alone as resonators, as well as the comparative resonance of the meatus auditorius externus, shall, as I hope, form the subject of

a future paper; but I would like to state now that the absence of a developed auricle in birds or insects is not, in my opinion, an argument against its utility as a resonator in man, for the wave-lengths of the high notes which these inferior animals must both use and hear as a means of intercourse with each other, are so short that they will resound perfectly well in the shallow auditory meatus found in them.

* TRANSLATIONS.

CHRONIC PSEUDO-MEMBRANOUS PERITONITIS.—Dr. Ch. Bäumler, of Erlangen (*Virchow's Archiv*), reports the post-mortem conditions found by him at the autopsy of a patient who died of Bright's disease in the German Hospital in London, upon whom the operation of paracentesis abdominalis had been repeatedly performed. The patient was a man aged 30 years, who, eight years before his death, had suffered from intermittent, which was followed by a general swelling over the body. Five weeks previous to his admission into the hospital on June 14, 1864, he had persistent epistaxis, and two weeks later, swelling of both feet came on. At the time of his admission he had general anasarca, and marked œdema of the legs. With the exception of a slight cough, there was nothing abnormal in the condition of the thoracic viscera. The area of splenic dulness was enlarged, that of the liver was normal. The urine at this time varied from 1200 to 2000 cubic centimetres in amount, was markedly albuminous, and contained tube-casts. From the time of this first admission until June 27, 1865, when he was admitted into Guy's Hospital, he suffered but little from œdema, but the urine still contained albumen. At this time the dropsy had become so marked that tapping was resolved upon, and was performed on the 4th of July, when 13,700 cubic centimetres of clear, yellow serum, containing albumen, were drawn off.

The operation was repeated on the 14th of the same month, and at this time much blood was mingled with the fluid drawn off, and the operation was followed by symptoms of peritoneal inflammation. Tapping was performed on several subsequent occasions, but the patient finally died of œdema of the lungs on the 15th of November, 1865. At the autopsy the legs were found œdematous, and upon opening the thorax there was found in the right pleural cavity some fluid containing blood, and there were also some threads of fibrin extending from the lung to the walls of the chest. The left lung was œdematous throughout. The heart and aorta were normal, with the exception of a slight thickening of the valves. Upon opening the abdomen a closed sac was found containing a loose mass of fibrin, in the interstices of which was a greenish-yellow fluid. The walls of this sac were three millimetres in thickness; their outer layer was fibrous, the inner somewhat less dense in consistence. None of the abdominal viscera could be seen until the posterior wall of this sac had been removed, back of which they lay. The thickness of the posterior wall was found to be about the same as that of the anterior wall, and the intestines were only loosely attached to it by organized adhesions. There was no connection with the liver, so that that organ bore to the posterior wall of the sac the same relation that it usually has to the parietal peritoneum. The surface of the false membrane towards the intestine, as well as the peritoneal surface, was deeply pigmented and smooth, like a serous membrane. The false membrane could be readily separated from the intestines, and also into several distinct layers. The perito-

neum beneath the false membrane, which probably was formed from the effusion occurring after the second puncture on the 14th of July, was in some places much thickened. A microscopic examination demonstrated that the false membrane was composed of fibrin with some fatty nuclei. The left kidney was found to be thoroughly disorganized, and adherent to the sac; the right was large and fatty. The spleen, left supra-renal body, pancreas, and the remains of the left kidney were all adherent to each other. From the apex of the bladder the false membrane extended to the promontory of the sacrum, completely separating the true pelvis from the cavity above.

The pigment found in the visceral peritoneum and the adjacent surface of the sac is an evidence that at one time there was great vascularity of the parts, and that there was hemorrhage after the first tapping; and it is possible that the parts were vascular up to the time of death, and that the blood only left them at that time.

W. A.

ACTION OF CHLORAL ON ALBUMINOID MATTER.—At a *séance* of the Académie de Médecine, held February 10, 1874, M. Personne presented the following summary of his experiments on this subject:

1. Fresh blood, to which hydrate of chloral has been added at an ordinary temperature, coagulates completely, preserves its red color, and remains without alteration at a temperature of 77° to 82° Fahr. When coagulated, it is insoluble in water.

2. Defibrinated blood, treated in the same manner, coagulates, but the coagulum is partly soluble in water. The dissolved matter has not been studied.

3. A morsel of muscle immersed in a ten per cent. solution of chloral becomes pale "flesh-color," and exudes a small quantity of reddish liquid, which deposits a brick-dust sediment. After exposure to the chloral solution for some hours the muscle loses the power of putrefaction, and exposed to a temperature of 60° to 78° Fahr. dries rapidly, and becomes friable. Dried at 212° Fahr., it constitutes a combination of chloral with the albuminoid matters of the tissues.

It does not furnish chloroform when treated by alkalis.

Like the combination of albumen with bichloride of mercury, it possesses the property of being soluble in an excess of either of its constituents, making its production a matter of some difficulty.

4. These facts suggested to M. Personne the idea of using chloral as a preservative for anatomical preparations, and he presented to the Academy a guinea-pig and a dog, the first of which had been injected with chloral solution four months previously, and the other eight weeks. Both were perfectly preserved.

Portions of muscle preserved in the chloral solution alone became dry and pulverulent, but if this was mixed with an equal quantity of glycerin they remained quite soft. A cerebellum was shown which had been preserved several months, and was still soft, fresh, and in excellent condition for anatomical investigation.

A. V. H.

EXPERIMENTS ON MECHANICAL ICTERUS.—M. Audigné presented, at a recent *séance* of the Société de Biologie, the liver and its appendages from a dog in whom the ductus communis had been ligated. The animal survived the operation nineteen days, emaciating rapidly, although having a voracious appetite. Within four hours subsequent to the operation, the urine, which had previously contained no trace of biliary coloring-matters, gave evidence of their presence in large quantity, and within a day or two the fæces were completely decolorized. The icteric tint of the

skin did not show itself until the eighth day, from which period it became rapidly more marked, and finally could be observed in the mucous membrane of the mouth and nose. The animal finally succumbed with symptoms resembling those of uræmic poisoning.

The autopsy showed the liver to be enlarged and congested, with dilatation of all the biliary passages. Under the microscope the capillaries and vessels generally were found dilated. The lymphatics were filled with a citron-colored fluid, which was also observed in the thoracic duct.

That previous observers have not found bile appearing in the urine so soon after ligation of the common duct, is due, M. Audigné thinks, to the ligation not having been performed sufficiently close to the intestinal outlet; some of the afferent branches of the common duct joining it very near the intestinal wall. A. V. H.

ARSENIC IN THE FURUNCULAR DIATHESIS.—M. De Savignac (*L'Abeille Médicale*) makes use of arsenic in the treatment of the furuncular diathesis in the following way. Internally he prescribes,

R Sodii arseniat., gr. ii;
Aqua, f̄ssv. M.

Of this mixture a teaspoonful in a little sweetened water is taken twice a day for three weeks. At the end of that time the arsenic is suspended, and for ten days sulphate of sodium is administered daily, in doses of half an ounce to an ounce.

He returns then to the arsenic as before, repeating the course of treatment, if necessary, three or four times. Occasional doses of decoction of dandelion or sarsaparilla are also administered, and the patient is confined to a diet chiefly vegetable.

Externally, poultices and, later, diachylon are used; and if the tubercles occur in groups, and are quite hard, the following emollient application is employed:

R Sulphuris sublimat., ʒss;
Pulvis camphoræ, ʒii;
Unguent. aq. rosæ, ʒiiss. M.

A. V. H.

LOCAL APPLICATIONS IN NEURALGIA.—*Chloroform.*—Dr. Dupuy speaks very highly of this remedy used as follows. A pledget of lint moistened with chloroform is to be applied to the painful locality, and retained in position a longer or shorter time, depending upon the age, sensitiveness, etc., of the patient, and the part operated upon. Usually, half a minute to five minutes is sufficient, and the application may be renewed from one to a dozen times. Dr. D. states that recent and superficial neuralgias yield to one or two applications, and that even in severe sciatica of long standing he has never been obliged to make more than twelve.

Blisters to apophysal points.—The constant presence of such points in neuralgias, as shown by M. Armain-gault, has led to the use of blisters applied in their immediate neighborhood, with very satisfactory results. In cases of facial, intercostal, lumbo-abdominal, and sciatic neuralgias, even when of the most persistent character and rebellious to other forms of treatment, this plan has been found effectual.—*L'Union Médicale*, Nos. 19 and 20, Feb. 1874. A. V. H.

PRESENCE OF LEAD IN THE BRAIN.—M. Troisier (*Le Mouvement Médical*), while making a chemical analysis of the brain of a patient who had been a worker in lead for more than thirty years but had never presented any signs of brain-disease, discovered well-marked traces of the metal.

PHILADELPHIA MEDICAL TIMES.

A WEEKLY JOURNAL OF
MEDICAL AND SURGICAL SCIENCE.

The Philadelphia Medical Times is an independent journal, devoted to no ends or interests whatever but those common to all who cultivate the science of medicine. Its columns are open to all those who wish to express their views on any subject coming within its legitimate sphere.

We invite contributions, reports of cases, notes and queries, medical news, and whatever may tend to increase the value of our pages.

All communications must bear the name of the sender (whether the name is to be published or not), and should be addressed to Editor Philadelphia Medical Times, care of the Publishers.

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EDITORIAL.

THE ANNUAL OVERFLOW.

WE have already stated our opinion that the faculties of our colleges are not to be blamed for the disgracefully low standard of graduation which prevails, and that they are not to be expected to alter it: it only remains to give the reasons for this opinion. In the first place, let us look at the matter from the stand-point of one of the incumbents.

An ambitious young man determines, if possible, to become a professor in a leading medical school, and arranges his plans and mode of life in accordance with this desire. The amount of unpaid work which he does is simply enormous, and, lured by the mere chance of success, he sacrifices ease, and what to other men are the pleasures of life. All this toil and all this sacrifice, it must be remembered, go for nothing if the aspirant does not finally attain his goal. So far from bringing an immediate reward,—unless it be the chair of surgery, of obstetrics, or of practice, which is coveted,—these labors undoubtedly lessen the chance of rapid success in practice; for practice, like a coy maiden, must be wooed with a single eye, and the dear public will pet a man who spends his nights in the ball-room, club-house, or theatre, but will contemptuously call the physician who uses the same time in the laboratory a chemist, vivisectioner, bug-hunter, or what not. In this round of unremunerative labor the years pass, until in middle life, after a hard canvass, in which others, who have striven

perhaps as hard as himself, suffer shipwreck, our hero is installed in the place of his ambition, and is overwhelmed by the congratulations of his friends. Full of zeal in the first flush of success, he looks around to see how he can carry out the long-cherished desires for reform. He finds that, his practice being only one-half that of his former class-mate, when his professorial fees are added the whole sum foots up two-thirds of the income of his less ambitious and perhaps less gifted neighbor, who has not pursued baubles, but the solid rewards of practice. He finds that he is a member of a highly respectable faculty and of an organization as rigidly crystallized as the quartz of his native hills. He finds, also, that if he conforms with this organization, at the end of the year he has some twenty-five hundred or three thousand dollars in his pocket; not an excessive honorarium for the work done. If he attempts to alter the organization, he soon perceives that it is hard to kick against the pricks, and that the probabilities are much greater in favor of his being crushed by the car of Juggernaut than of his stopping it. He inevitably—moved by self-interest and chained by stern necessity—slides into the traces, and pulls, side by side, shoulder to shoulder, with the first men in the medical profession of the United States. He were, indeed, a man of strange fibre that, under the circumstances, would offer himself for immolation.

These things being so, it is evidently folly to expect reform to come from within the faculties. A board of trustees, having the power and having themselves no pecuniary interest in the matter, may force the faculty into the change. But, unless they attach salaries to the chairs, such proceeding, although for the general good, would be arbitrary and unjust to the professors. Especially, however, is it unjust in the profession to expect the faculties to originate reforms. In the proposed changes the professors have nothing to gain and everything to lose, whilst the profession has everything to gain and nothing to lose. What right, then, has the profession to expect the faculties to inaugurate the reforms? With what justice does the profession ask the professors to sacrifice their livelihoods for a reform which can redound only to its (the profession's) good, and for which the profession will not make the slightest effort? The sacrifice must be made by some: let it be by those who gain by it. Let it be by those whose numbers will so divide it that each individual will scarcely feel his share.

There are two ways in which it is conceivable the profession could effect the desired change. That which is least practicable, because requiring greatest

consentaneousness and persistency of action, would be for the profession to force, so far as lies in its power, medical pupils to go to those colleges which adopt the advanced system. Thus, if our city schools found that a third, or even a fourth, of their classes, owing to the efforts of their own alumni, were going to Harvard, it would not be long before their courses would be prolonged. In other words, let the profession make it the interest of the schools to raise their standard, and they will do it.

Another, and seemingly far more practicable, as it is more just, method of reform, is for the alumni to raise endowment funds. It is certainly directly to the interest of practitioners that the present manufacture of rivals by steam should be checked. There must be nearly four thousand living alumni to either of the large medical schools in this city, and an average of fifty dollars each would yield a sum of \$200,000 for each school, a sufficient endowment to start with. In order to secure the end, however, it would only be necessary to get a fourth of that sum paid in, and then let this be put out at interest, and in course of time the endowment would be in hand. Some of the alumni are rich, and assuredly it would not be difficult to obtain a number of subscriptions ranging from five thousand to five hundred dollars. Moreover, we think that no trouble would be experienced in obtaining subscriptions from gentlemen of wealth to aid the effort, if the profession showed itself in earnest by subscribing liberally itself; and the complete success of any such movement, if properly managed, seems to us assured. Certainly, if it were to fail, we ought all to hang our heads, and forever hold our tongues "about our high and noble profession,"—talk which, in view of the doings of commencement-day, has always seemed to us at best balderdash. In the name of a profession which ought to be high and noble, we hope some one will make the effort, and that clamor against or about the faculties will cease in action. Let those who have talked loudest do most.

In some of the New York colleges the effort is being made to raise endowment funds for new chairs. We are not entirely *au courant* with the movement, and may misconceive it; but, as we understand it, we do not like its drift. It is not new professors, on whom students may or may not attend, but forcing the students to know that which is at present taught, that is needed. When the present professors are independent of their scholars, it will be time enough to raise endowments for new chairs.

THE COMPLIMENTS OF THE SEASON.

THE *Medical and Surgical Reporter* renews, in a late issue, its attack upon this journal, or, rather (for the attacking party is evidently trying to haul off), feebly replies to our notice of its original assault. It reiterates its incorrect statements, and calls us a phoenix, without in any way meeting the very distinct points we made in our last editorial,—a procedure which reminds us of the boy who, getting the worst of a fight, begins to blubber, "I'll tell my mother on you." We may be a phoenix; if so, we must be a young, vigorous one, and have nearly five centuries of life before us,—not a very unpleasant prospect; but if ever by reason of age we get as feeble as our venerable cotemporary, we trust our friends will see that we mount the funeral pyre before the appointed time. We are further likened to "Vholes;" our obliquity of vision is commented upon, and in a characteristic clause, in which the words (omitting the prepositions and articles) average ten letters each, we are read a lesson upon the "proprieties," all simply because we advertise. We remember once to have been in a boarding-school in which there was read every week a fierce blast against the use of tobacco by a governor who, when he came to the passage, rolled the delicious quid into the farthest corner of his mouth. We are afraid our friend, in writing concerning the proprieties for our reproof and edification, must have seriously endangered himself; for, being in possession of the knowledge that the *Reporter* advertises as much as it knows how, and remembering also how with one hand he had filched our columns for editorial and with the other had smitten us hip and thigh, he must surely have actually swallowed the quid.

THE Philadelphia correspondent of the *Boston Medical Journal* says in a recent letter:

"It is said that the remains of the twins will now be carried through the States on exhibition; that the loving widows are filled with a burning desire to make the twins profitable even after death; that, however, strenuous opposition to this delightful and savory plan has arisen on the part of an invalid daughter of one of the brothers. There may yet be an opportunity in Boston to gaze upon the forbidding, shrivelled remnants of Chang and Eng."

The correspondent is scarcely to blame in echoing the universal report in regard to the family of the twins, but we trust that in his next letter he will correct what is in truth an atrocious libel. It seems that the widows of the twins were

persuaded, by the conjoined eloquence of their usual legal and medical advisers and of the commission, to allow the bodies to be brought North. The two sons of the deceased were living in the far West, and, on arriving at their homes, were overwhelmed with mortification and grief at learning the course events had taken. Week before last they arrived in this city, and a sadder couple it has rarely fallen to our lot to see. When Prof. Allen, as they stood with tears in their eyes before the corpses, expatiated upon the perfectness and success of the embalming process, they heard him through quietly. As soon as he had finished, very sadly and very earnestly one of them asked, "Doctor, is it possible to undo this? Can the fluids be taken out? We would give anything to have the bodies as they were." Their grief was evidently very real, and we would not have dragged it even thus far into publicity had it not been for their evident desire that the public should know their abhorrence of all that has been done in the matter. If the young men, who are now the heads of the respective families, had been at home at the time of their fathers' death, the bodies of the twins would never have reached Philadelphia.

THE past season has been a very successful one with our medical schools,—the Jefferson graduating 151 men, and the University 121. Considering the great disadvantages the latter institution labored under in being, as it were, houseless, and dwelling in the tents of a strange people, we think both the faculties are to be congratulated on their success. We do not doubt that the standard of graduation with these schools is as high as that of any similar institution in the country, always excepting noble Harvard, and the opportunities they offer for clinical study are almost unrivalled.

If any student has the nerve and muscle to contend with New England climate, customs, and examination, and desires to get the most valuable diploma in the country, Harvard should be the school of his choice, and Boston his wintering city. To those of not such robust faith, purpose, and ability, we can heartily commend Philadelphia and its colleges.

WE are indebted to Dr. J. L. Bodine, of Trenton, for the knowledge that the bottle of medicine and the stomach of the deceased James A. Grant, the victim of the alleged poisoning some time ago commented on in our columns, have been sent to Prof. Rogers for examination.

PROCEEDINGS OF SOCIETIES.

PATHOLOGICAL SOCIETY OF PHILADELPHIA.

THURSDAY EVENING, FEBRUARY 26, 1874.

VICE-PRESIDENT, DR. H. LENOX HODGE, in the chair.

DR. MORRIS LONGSTRETH presented a specimen of intestine containing *multiple intussusceptions*. The patient from whom it was taken suffered an injury of the fore-arm, for which amputation was performed. For some time previous to death, which occurred from obscure causes, he had had a profuse diarrhoea. At the autopsy there were found eight invaginations of the small intestine, all occurring in its upper-half portion. The largest was not of a greater extent than three inches, while the smallest was not over half an inch. They were easily reducible, three of them having been pulled out previous to the specimen being brought before the Society. There were no evidences of any inflammatory trouble at these points or at other portions of the abdominal cavity. No lymph or adhesions, nor any congestions, were found in any portion of the intestine.

Dr. H. LENOX HODGE asked whether there were no symptoms previous to death pointing to the condition of the bowel.

Dr. LONGSTRETH replied that there were none except the diarrhoea alluded to in the history of the case.

Dr. WHARTON SINKLER recalled a patient who died of phthisis, and in whom a number of intussusceptions were found post mortem, but he was also the subject of diarrhoea before death.

Dr. JAMES TYSON had met, occasionally, in adults as well as children, intussusceptions which had not been suspected before death; the important difference between these and those which gave rise to symptoms before death being in the presence of peritonitis, of which they became a cause. He referred to the specimen which he had presented at the previous meeting, and which was taken from an infant in whom there had been diffuse peritonitis with obstruction before death.

Dr. A. C. W. BEECHER presented a specimen of *intussusception* taken from a child less than fifteen months old, in which there were five intussusceptions (four existing at present, one having been pulled out) in a portion of small intestine two feet in length. They are all invaginated in the same direction, two of them extending fully an inch and one-half. There are no inflammatory deposits or adhesions. There were no symptoms before death pointing to this condition, and he was not looking for it when it was found. He had also found at about the same time, while resident physician at the Philadelphia Hospital, similar unlooked-for intussusceptions in very young children whom he had examined post mortem, but not so many invaginations in so short a piece of intestine as this.

Dr. H. LENOX HODGE exhibited *sections of the condyles of the femur and of the head of the tibia and the patella*, removed to-day by exsection of the knee-joint, at the Presbyterian Hospital. The patient is sixteen years of age, and is in good condition. He has suffered from arthritis of the right knee for about five years. A year ago he was in a hospital for three months, under treatment by rest and counter-irritants, without permanent benefit. Since then he had suffered much pain, and been obliged to use crutches when he moved about.

The semilunar cartilages have been completely destroyed, and in several places the articular cartilages on both the femur and tibia, and at these positions the bone is carious. Upon making the sections with the

saw, the bone above the joint was found softened. The patella and its cartilage are less diseased than the femur and tibia.

Dr. HODGE asked the opinion of the members as to the probable cause of the complete destruction of the semilunar cartilages.

Dr. JOHN ASHHURST, Jr., said that, according to his experience in those cases in which the disease originates in the synovial membrane, particularly in cases of gelatinous arthritis, the semilunar cartilages disappear at a comparatively early period; whereas in those cases in which the disease originates in the extremities of the femur and tibia the articular cartilages suffer more, and the semilunar cartilages are found comparatively unaltered.

Dr. HODGE asked Dr. Ashhurst whether he had ever met cases in which there was not a trace of the semilunar cartilages left.

Dr. ASHHURST replied in the affirmative.

Dr. JAMES TYSON presented a specimen of *enormous hypertrophy of the heart* which had attended marked contraction of the kidneys in a patient dying at the Philadelphia Hospital. There was no valvular disease except slight thickening of the mitral valves.

The kidneys exhibited in a striking degree, to microscopic examination, the hypertrophied condition of the muscular coat of the arterioles pointed out by Ludwig, Traube, Johnson, and others, as well as the other minute structure of the chronically-contracted kidneys.

At this meeting of the Society, a committee was also appointed to which was referred the subject of the so-called "ovarian cell," pointed out by Dr. Drysdale. The committee was directed to make comparative investigations of ovarian, serous, cystic, and other fluids with a view to determining the existence of a cell sufficiently distinctive to be called "ovarian cell." The President appointed Drs. Tyson (chairman), Bertolette, Richardson, Jenks, Mears, and Willard, with power to increase this number.

REVIEWS AND BOOK NOTICES.

TREATISE ON THERAPEUTICS: COMPRISING MATERIA MEDICA AND TOXICOLOGY, WITH ESPECIAL REFERENCE TO THE APPLICATION OF THE PHYSIOLOGICAL ACTION OF DRUGS TO CLINICAL MEDICINE. By H. C. WOOD, JR., M.D. J. B. Lippincott & Co., Philadelphia, 1874.

The want which this work of Dr. Wood is written to supply is a very real one, as any one must have felt who is constantly asked by students for the best text-book in therapeutics, and who is as constantly constrained to reply that there is none in English wholly or approximately satisfactory. The books written by those whose lives have been passed in the practice of medicine, and which are chiefly of a clinical and so-called practical character, seem very meagre to the physiologist, and must always be open to the very grave objections urged against supposed therapeutic facts based upon the usual clinical observation alone. Such are the works of the elder Dr. Wood, Waring, and Stillé. The latter, although by no means rejecting experimental data, has not kept pace with recent investigation, and fails in that appreciation and co-ordination of isolated facts which we have a right to expect in a systematic treatise. It has been, however, on the whole, the best work on the subject.

The little work of Dr. Ringer is exceedingly attractive from its conciseness, the positiveness with which its views are announced, and the apparently great confidence which the author places in the practical

resources of therapeutics. But the experienced physician can hardly sympathize with the author's enthusiasm, and the student who accepts his views without a very liberal allowance of skepticism is preparing for himself a future of disappointment. Besides this, it is entirely devoid of systematic arrangement, a deficiency which, notwithstanding all that may with truth be said of the impossibility of a scientific classification, is a very great one.

Nothnagel's book has been, since its recent (1870) appearance, by far the best one; and had there been a good translation it would have been at once recommended by the writer to all his students, as the German original now is to those who can read it. And from this position he is not yet prepared to displace it.

Dr. Wood in his preface fully recognizes the perplexities and contradictions which beset the older method of therapeutic investigation, and desires to avail himself of experimental results so far as possible. He says that he is surprised to find how much has been done in this direction; and we must congratulate him upon the success with which he has searched in the literature of experimental pharmacology, which is indeed extensive.

He says, "The plan of the present work has been to make the physiological action of remedies the principal point in discussion. A thoroughly scientific treatise would in each article simply show what the drug does when put into a healthy man, and afterwards point out to what diseases or morbid processes such action is able to afford relief."

"Unfortunately, in the great majority of cases, our knowledge is not complete enough for this, and the clinical method has to be used to supplement the scientific plan."

We cannot altogether agree with him here: pathology is not yet sufficiently advanced, if it ever will be, to make an *immediate* application of experimental pharmacology of practical use, no matter how perfect the latter science may be; and we think it a mistake, and one calculated to retard the advance of therapeutics, to oppose experiment to "clinical observation." Granting that the latter method of investigation is exposed to almost innumerable chances of error, from which the former is free, and acknowledging that a vast amount of so-called clinical observation is utterly untrustworthy, it is not necessarily so. If it is a "pursuit of knowledge under difficulties," yet a measure of knowledge, at least, may be attained by disinterestedly seeking for it; and when it is attained it is directly useful. The foundation of science is not in the subjects investigated, nor in the special means of investigation, but in the scientific mind, the logical spirit in which the work is carried on.

Dr. Wood should remember, too, that disagreements between various experimenters, not only as to the theories, but also as to the facts, in experimental observations on drugs, are by no means unknown, and that physiology is far from being a complete science, even in regions which have been industriously explored.

However much we are inclined to disagree with the author's preliminary views, we do not feel so much disposed to find fault with the way in which he has carried out his views. No writer on this subject can possibly get rid of clinical results if he wants to; and the author has not attempted it.

Lists of antispasmodics and alteratives, the latter including sarsaparilla, guaiacum, sassafras, and dandelion, show that he thinks the opinions of his predecessors worth mentioning, even if he does not agree with them.

The classification seems not altogether satisfactory in many points; but, as the writer is obliged to say the same of every one that he has yet seen, including his own manufacture, it is hardly worth while to do

more than mention, for instance, that all the alkaloids of opium cannot properly be included under the head of analgesics; that the mydriatic action of atropia is not its principal one; that the division of emetics simply into vegetable and mineral ignores a more important physiological distinction; and that drugs like epispastics, which act only through the nervous system without entering the blood, ought not to be placed in the same division with those which, like diuretics, are absorbed and re-secreted,—some of them at least having a decided effect in the excretion of solids, rendering probable an action upon the general metamorphosis of tissue.

In the body of the work, Dr. Wood has given a brief, but, for his purposes, sufficient, description of the drugs discussed. Then we have a statement of physiological and clinical facts, so far as they contribute to a knowledge of the *modus operandi* of the drug; and, in conclusion, a summing up of actual results, indications for use, and methods of administration. The poisonous action is stated; since it may not only contribute to a knowledge of the mode of action, but because the physician may have to combat toxic effects, or inform a court in criminal cases.

The author has—very wisely, we think—avoided on the one hand long theoretical discussions about words, though not neglecting such a statement of theory as may best harmonize the facts; and, on the other, such absolutely valueless but apparently “practical” statements as that Dr. Weissnicht of Mudfog “deems sassafras a sovereign remedy for peritonitis,” or that “Dr. R. Pipiens, of Barking Hollow, has cured a hundred cases of croup (many of which were supposed to be membranous) with a syrup of *symplocarpus fetidus*.”

If it should seem to some critics, as it probably will, and as the preface leads us to expect, that the clinical side is somewhat neglected for the experimental, it should be remembered that this condition is precisely the opposite of that which obtains in nearly all the works on therapeutics already in use, and that this is strong where they are weak. Still further, if this book is to be used, as it will be, for a text-book, the student begins with that part of the subject which is the more accurately known, and proceeds thence to the practical application of his knowledge,—being thus provided with a basis for intelligent appreciation and criticism before beginning his observations on the practice of his clinical teachers. No one can deny that it must contribute immensely not only to the welfare of the patient, but also to the comfort of the practitioner, that the latter should begin his professional life with a clear understanding of the mode of action of drugs, and a rational skepticism as to their therapeutic value, rather than encouraged by vain promises of success which can never be fulfilled, and take refuge, after years of random attempts and disheartening failures, in the skepticism of ignorance.

We think that this work will be a very valuable one to teachers and students, as well as to those who wish to have at hand some statement of the latest physiological and experimental investigations without going through the labor necessary to find them in the periodical literature of the last two or three decades.

The book seems very free from misprints and misspelling, and the neatness of its dress is sufficiently guaranteed by the names of the publishers.

ROBERT T. EDES.

HARVARD UNIVERSITY MEDICAL DEPARTMENT.

ANNUAL REPORT OF THE SUPERVISING SURGEON OF THE MARINE HOSPITAL SERVICE OF THE UNITED STATES FOR THE FISCAL YEAR 1873. By JOHN W. WOODWORTH, M.D.

This report gives the laws regulating the marine hos-

pital service, the progress of the re-organization of the same, the details of the year's working, and some papers of general professional interest. Among the latter we would especially notice those on yellow fever, one of them containing a very elaborate table giving the localities in which yellow fever has appeared since A.D. 1868, their elevations above the sea, and the duration and time of the epidemics, as well as the mortality.

We notice that there were treated during the year in the various hospitals of the service, at an average cost of one dollar per day, 12,697 seamen, and the hospital-money collected from the seamen was \$335,845,—facts which show the great importance of the service.

GALVANO-THERAPEUTICS. Lindsay & Blakiston, Philadelphia, 1873.

This little book of sixty-five pages, the name of whose author, strangely enough, does not appear on the title-page, is, we believe, a revised reprint of a report made to the Illinois State Medical Society in 1873 by Dr. Prince. It is by no means a complete treatise on the subject, but contains interesting, although dilute, reports of the use of the remedy in various cases. Those who wish complete libraries will of course purchase the memoir, but we do not think it can in any way supply the place of larger and more complete works. We notice that tendency to let loose the imagination, which seems an inherent property or quality of most medical electricians. Thus, we are told in inflammations to apply the negative pole to the inflamed spot, so as to diminish the oxygen in the part, and thus “starve the phlogosis.”

GLEANINGS FROM OUR EXCHANGES.

SPECIMEN OF FATAL CAUTERIZATION OF LARYNX AND ŒSOPHAGUS.—Dr. Jacobi (*N. Y. Obstet. Soc. Trans.*, December 2, 1873) exhibited the digestive organs of a child, nine months of age, which had been taken ill with what had been reported as croup. The medical attendant advised cauterization of the larynx, and attempted it with the solid stick of nitrate of silver: the stick broke, however, and the child swallowed the detached portion. The child died, and the specimen removed at the autopsy was sent to Dr. Jacobi, with the above imperfect history. The epiglottis, upper vocal cords, the whole interior of the larynx, and the upper portion of the trachea, appear considerably reddened and hyperæmic, which, however, may be partly due to imbibition: at all events, there were no traces of croup, but only the indications of a simple laryngeal catarrh. The action of the nitrate of silver was not localized, but the whole laryngeal mucous membrane was equally injected and hyperæmic. The Œsophagus was injured by the caustic to the extent of one inch at its commencement, a distinct eschar being visible. The stomach shows no injury in its cardiac portion, the piece of caustic having followed the dependent position of the organ and lodged near the pylorus, where a solid piece of the stick of nitrate of silver is still to be seen, surrounded by a thick layer of albuminates, and imbedded in the coats of the stomach; there is no secondary local inflammation about this spot, an observation agreeing with the acknowledged action of lunar caustic.—*Amer. Jour. Obstet.*, February, 1874.

PUERPERAL THROMBOSIS (*The Lancet*, February 28, 1874).—At a meeting of the Obstetrical Society of London, the above subject was discussed.

Drs. Playfair and Hayes pointed out that thrombosis had a wider application than was commonly given

it, as a cause of disease and of sudden death in puerperal women. Attention has been chiefly limited to only one of the manifestations of this disease, on account of its tangible symptoms,—phlegmasia dolens, which is, however, dependent upon the same conditions as ante-mortem plugging of the pulmonary artery, the clots being produced by the changes wrought in the blood by the pregnant state or its accidents, such as flooding, septicæmia, etc. Dr. Taylor thought there were three points worthy of notice: 1, it appeared that the patients were suddenly found to be at the point of death before any danger had been apprehended; 2, in those cases which were examined after death a firm laminated clot was discovered, evidently not of very recent formation; and 3, in those cases in which a stethoscopic examination was able to be made, some abnormal sound was discovered at the base of the heart. He would suggest, therefore, that if the heart-sounds were subjected to examination during the puerperal period, either as a matter of routine or, at any rate, more generally than they usually are, in all cases, or at least in those in which thrombosis is prone to occur, as after hemorrhage, the danger might in some cases be foreseen, and by suitable treatment be lessened or averted. Dr. Routh extolled the efficacy of liquor ammoniæ in the prevention of thrombosis, or in the removal of clots already formed.

TREATMENT OF PITYRIASIS RUBRA (*The Lancet*, February 28, 1874).—Dr. Tilbury Fox believes that in cases of pityriasis rubra—hyperæmia of the skin and exfoliation of the cuticle—the free use of diuretics is called for, especially in cases which come under observation at an early date, before the hyperæmic state of skin has given rise to secondary alteration, such as infiltration into the tissues. It is an established rule in renal therapeutics to stimulate the skin to increased action in cases where the kidneys are congested, or in other conditions in which it is desirable that they should be given rest from work. In the case of a hyperæmic state of skin, where this hyperæmia is not removable by local remedies, and where it is extensive, it is likewise desirable to stimulate the kidneys to increased activity, to relieve the skin of its work,—to give it rest.

Dr. Fox uses a diuretic mixture composed of half a drachm each of acetate and bicarbonate of potassium, one drachm of spirit of juniper, and one ounce of infusion of calumba, for each dose, three times daily. The skin is soothed by oily inunctions, and perchloride of iron is administered internally to act as an astringent to the weakened cutaneous vessels.

DANGER OF INTRA-UTERINE INJECTIONS.—The *Gazette de Foulon* gives the details of two cases, which show that while intra-uterine injections are energetic agents in modifying the conditions of this mucous cavity, they should only be employed with caution.

In one case, though the patient had become enfeebled by repeated hemorrhage, she endured, without suffering inconvenience, two injections of the uterine cavity. A third, consisting of a weak infusion of chamomile and diluted perchloride of iron, was succeeded by death in thirty hours after decided symptoms of subacute peritonitis. The mucous lining of the uterus and right Fallopian tube, and the adjacent peritoneal surface, were found, after death, covered with an ink-black clot and presenting unmistakable evidences of inflammation.—*Medical Examiner*.

CONGENITAL DEFORMITY FROM IMPRESSION UPON THE MIND OF THE MOTHER (*The North-Western Med. and Surg. Journ.*, March, 1874).—Dr. Franklin Staples reports the following case. A laborer, working in a stone-quarry, had his right hand badly crushed by a falling derrick. The mangled part was amputated, but

the loss of the thumb and forefinger and subsequent contraction of the tendons resulted in an ugly deformity. At the time of the accident, and for some months afterwards, the man resided in a boarding-house, the mistress of which was pregnant. While he was ill she nursed him and dressed his hand, although with a strong feeling of dislike and almost of disgust, and subsequently the frequent sight of the stump greatly annoyed her.

In due time she was delivered of a healthy female child, well formed and fully developed in all respects, with the exception of its right hand, the three middle fingers of which were absent. The general appearance of the two deformities was remarkably similar. Both parents were healthy; their other children had been well formed; and no instance of congenital deformity had ever occurred in their families.

SCIRRHUS OF THE MESENTERY (*North-Western Med. and Surg. Journ.*, March, 1874).—Dr. Staples reports a case diagnosed to be scirrhus of the mesentery, involving duodenum and pylorus. Gerinan, male, aged 50, sick four months, pain in epigastrium, frequent vomiting, obstinate constipation, emaciation, cancerous cachexia, tumor three inches in diameter, circumscribed and movable, nearly in centre of epigastrium. The patient had worked in a sawmill, and had worn a tight leathern belt for years, instead of suspenders. Dr. Staples had known another case of scirrhus of the pylorus in a man who had worn a tight belt, and another of cancerous disease of the mesentery in a patient who had for several years worked in a shingle-mill, where he was compelled to lean over the bench of his machine, bringing a constant pressure to bear across the abdomen.

POSTURAL TREATMENT FOR EXTENSIVE DISTENTION OF THE INTESTINES WITH GAS (*Chicago Medical Journal*, March, 1874).—Dr. Chas. T. Parkes recommends that what he terms the "postural treatment" should be tried in all cases of tympany, especially in those complicating gestation. A large enema should be given, so as fully to empty the lower bowel; the patient should then be turned with the face downwards, so as to throw the weight of the body on the distended abdomen; the thighs being flexed upon the abdomen, the patient should be directed to make straining efforts, which are usually followed by the escape of large quantities of gas.

MISCELLANY.

CREMATION.—The subject of cremation is again taken up by Sir Henry Thompson in the pages of the *Contemporary Review*. In this article he replies to various criticisms that have appeared in different journals, and gives a detailed account of the process he would suggest as most appropriate for the object in view. Sir Henry states, and it is certainly a somewhat remarkable fact, that the only formal opposition to cremation has been made by the present medical inspector of burials for England and Wales, Mr. Holland; and in reply to the observations of this gentleman, Sir Henry refers to the evidence obtained by Drs. Southwood, Smith, Waller, Lewis, and others, in regard to the large amount of gases produced in the decomposition of the body, and the impregnation of soil, water, and air to a considerable distance. Such impregnation by the dead, and consequent danger to the living, cannot, we presume, be questioned for a moment, and is fully borne

out by the statements of Mr. Bowie and the general experience of the profession. We must also fully endorse Sir Henry's remarks in regard to the elimination of ammonia, or at least of carbonate of ammonia, from decomposing animal tissues, and are at a loss to understand how any doubt can exist about the point.

Turning to the second part of Sir Henry Thompson's essay, he remarks that he has personally superintended the burning of three bodies of animals, one weighing forty-seven pounds, another one hundred and forty pounds, and a third no less than two hundred and twenty-seven pounds, with the most satisfactory results, the residue in the first instance weighing only one and three-fourths pounds, and the second four pounds. In the last case the body was placed in one of Dr. Siemen's furnaces, the interior of which was heated to about 2000° F. The inner surface of the cylinder, which was about seven feet long by five or six feet in diameter, was smooth, almost polished, and no solid matter but that of the body was introduced into it. The gases, which were at first abundantly given off, passed through a highly-heated chamber, among thousands of interstices made by intersecting firebricks laid throughout the entire chamber lattice-fashion, in order minutely to divide and delay the current, and to expose it to an immense area of heated surface. By this means they were rapidly oxidized, and not a particle of smoke issued by the chimney. No second furnace was therefore in this instance requisite, though under certain circumstances the products of combustion might be transmitted through another, and the fumes from this into a third, and so on, each being made available for the combustion of one body. The process was completed in fifty-five minutes, and the ashes, which weighed about five pounds, were removed with ease. Sir Henry meets the objection that has been raised to the practice of cremation, that it will lead to an increase of crimes of poisoning, by suggesting that a public verifier of the cause might be appointed, whose duty it should be to ascertain and certify the cause of death, whilst the stomach might be kept for some years. In reference to the expense, he still thinks it would be far within the present cost of a funeral. As regards ourselves, we have already expressed our opinion that it is an eminently satisfactory mode of disposing of the dead,—safe, speedy, wholesome, and economical; but we rather doubt whether ancient custom and popular prejudice can be so easily overcome and altered as Sir Henry Thompson appears to believe.—*London Lancet*.

UTILIZATION OF SEWAGE.—The following facts with regard to the utilization of the sewage of the city of Paris are taken from the official returns. At Clichy, a bend of the Seine forms a sandy, level peninsula of some 5000 acres. The barrenness of this peninsula is proverbial, and hence it was on this land that a portion of the city sewage was first directed, with a view to put the utility of this kind of fertilization to the severest possible test. The preliminary works were begun in 1868, and completed in May, 1869. From that time

between 5000 and 6000 cubic yards of the sewage have been raised daily by engines of forty-horse power and centrifugal pumps, and of this two-thirds were received into tanks for chemical manipulation, the remainder being applied to a piece of land twelve or fifteen acres in extent. At the end of several months, the results of this experiment upon a naturally poor soil were such that the neighboring farmers asked to be included in the benefits derived from the sewage. Owing to the extreme permeability of the soil, 20,000 cubic yards of sewage could be annually absorbed per acre, and the farmers obtained crops of 70,000 pounds of cabbages, 60,000 pounds of carrots, and 150,000 pounds of turnips. All land suitable for irrigation rose in value. No evil effects on the health of the inhabitants could be detected, and a village sprang up around the works. A Parisian perfumer established his manufactory on the outskirts of the irrigated land, and obtained a supply of the sewage-water for his gardens of aromatic herbs, more especially of peppermint. It is worthy of note, in this place, that the finest mignonette of Covent-Garden Market, London, has long been grown from sewage-irrigated soil.—*Popular Science Monthly*.

DR. LOUIS A. DUHRING was recently elected Lecturer on Dermatology in the University Hospital.

DR. H. C. WOOD was also appointed to the position of Clinical Lecturer on Diseases of the Nervous System, and Dr. James Tyson Lecturer on Pathology and Histology, in the same institution.

DEATH OF DR. FORBES WINSLOW.—Dr. Winslow was born in London, in 1810. He began his medical studies in New York, took the degree of M.D. at King's College, Aberdeen, and became a member of the Royal College of Surgeons, London, in 1835. His first published works appeared in 1831, since which time he has made numerous important contributions to the literature of medicine, chiefly in the department of nervous and mental diseases. His most valuable work in this line, "The Obscure Diseases of the Brain, and Disorders of the Mind," was published in 1860, and has since passed through several editions. He died in London on March 4, 1874.

NOTES AND QUERIES.

[THE following extract from a letter to Dr. T. G. Morton, of this city, by Lawrence M'Cully, Esq., of Honolulu, in regard to leprosy, has seemed to us to be well worthy of a place in this department of the *Times*.—ED. P. M. T.]

The question of our exposure to the disease came to us, the foreign community, within the year, with terrible personal interest. While the new government of Lunalilo was energetically prosecuting the sad business of collecting the lepers, separating them from their families, and deporting them to perpetual seclusion, it was rumored that two or three white men of respectable station had the disease. One was M. C—, a French gentleman, say of 55 years, a resident here for perhaps ten years. He had come here with his wife and family; had been a widower for five years. He had suspicious blotches about the temples, or below, and a thickening of the lobes of the ear. Of course he disclaimed it; if I remember, he passed some medical examination; he continued in public. The signs of it were such that the public feared communication with him. A further examination was insisted on, and, being stripped, he was found covered with an unmistakable leprous eruption, was confined in the receiving hos-

pital, and subsequently, having made his own arrangements to be received by the French government at Tahiti, was transported thither, and has since been taken to France. He claimed at first, stoutly, that he had not exposed himself by illicit connection, and that he must have got his disease from his washed clothes, or otherwise innocently; and we thought, from his age, his family circumstances, etc., that it was so, and just that was what frightened us. It was not doubted that men of promiscuous licentious habits exposed themselves to something worse than venereal, but if wholesome, respectable, and moral men, as well as women and children, were liable to take the disease, we must flee the country at any sacrifice of property. But investigation relieved us by finding where M. C— got his disease, and confronting him with the very woman, who had become a developed leper.

Then there was the case of Mr. B—, "Judge B—," published a short time since in the California papers. Mr. B— was well known to all of us here,—a family man, beyond middle life when he left here; a church-member, in the odor of respectability; no rumor tainted his name; a man of fastidious personal neatness, and refined tastes.

Some time after he left the kingdom, to live in San Francisco, we heard that he had a mysterious disease; leprosy was sometimes hinted. He still kept in public, holding his office of Commissioner in Bankruptcy till shortly before his death. We have no doubt here, and I understand there is now no doubt there, that it was leprosy. How did he get it? We must think that, all unsuspected, he yielded to temptation, and suffered in this terrible and exceptional way. Rev. Mr. Damon told me that some one, whose name he did not give me, told him that he knew that such was the fact, mentioning the house itself where Mr. B— had resorted.

But three or four foreigners have been found with leprosy; all of them of a class as liable to take it as the natives, because they live in about the same way. One was a German blacksmith,—my nearest neighbor, in locality; my residence is out of town. He used to say that he feared he had the leprosy. This was some six years ago, when there was less alarm about the matter. For some time he had enlargement of the ears, and some leprous appearance on his forehead. On a final examination, for which he presented himself, it was settled that he had the disease, and should go to Molokai. He was allowed time to settle his humble affairs, and went, now five years ago. I have learned that the disease has progressed so that his fingers and toes have dropped off. His wife, a native woman, followed him there, and still remains, and, as yet, does not herself show leprosy. His five children were left behind, and show no symptoms of it. Three of them, boys, of 11 years and under, remain in my neighborhood, and are daily about my house,—poor little waifs!—living from my kitchen, as nice-looking as any native children.

One of the foreigners who has the disease is Williams, an elderly man, a mason by trade. I saw him at the Kalihi Receiving Asylum, at the only visit I have made there. The disease appeared externally on him, in his ears, hands, and forehead. In some conversation, he appeared very well; said that he was careful to avoid giving contact to any of his friends who visited there; that he was deriving some benefit from medicine he was taking experimentally. He showed us his son, a small boy, among the lepers, who was a pitiable spectacle. His wife (a native) had died of the disease. My impression is that all their children have it. Williams said it first appeared in the family after they had all been many hours in the sea, from the capsizing of a little inter-island coaster, when this Hawaiian woman for half a day assisted her husband and sustained her children, swimming to the shore.* It is understood that the general cachexy of the Hawaiians has greatly promoted the spread of the disease,—indeed, is almost a condition of it. You are aware of the great diffusion of the syphilitic taint among them: this is aggravated by neglect, uncleanly habits, ill-ventilated houses, etc., and especially by the use of *awa*, which itself depraves the blood, and makes the user of it look like a white-scaled leper, and diffuses any contagious thing they may have, by their mode of preparing and using it, which is by having persons to chew it, and, collecting the saliva (which it excites in quantity) in a bowl, diluting it, perhaps, with water, all drink from the same. So, too, their custom is to draw several whiffs from the pipe, and pass it on through the circle, carrying from lip to lip whatever disease any one person may have.

TO THE EDITOR OF THE PHILADELPHIA MEDICAL TIMES:

DEAR SIR,—Having made more than one attempt to medicate the fundus of the uterus, as suggested by Dr. William Goodell in his articles published in the *Medical and Surgical Reporter*, I cannot help expressing my conviction that the medicine used, be it tincture of iodine, or what not, is entirely wiped off as it passes through the cervical canal. If the gentleman can offer proof that he does get his medicine in contact with the mu-

cous lining of the fundus, I have nothing more to say. In my humble opinion, the benefit derived is due to the direct effect upon the cervical canal, for I feel sure that when the attempt is made to introduce a probe, wrapped with cotton, dipped (we will say) in the tincture of iodine, through the cervical canal to the fundus, the cotton is squeezed dry, so that he *does* reach the fundus, but with a pledget of cotton only stained with iodine, from the point of which (the pledget) I fail to see how he can medicate.

Yours, very truly,

March 25, 1874.

SUBSCRIBER.

TO THE EDITOR OF THE PHILADELPHIA MEDICAL TIMES:

A MEDICAL man practising in Nebraska has just written me, in a private letter, an account of an accident the possibility of which may not have been familiar to all surgeons. Perhaps, therefore, it ought to be made useful by publication.

Having to treat an old man of 83, for distressing retention of urine, produced by enlarged prostate, along with stricture of the urethra, he succeeded, with difficulty, in introducing an elastic catheter into the bladder. While, however, he was withdrawing the stilette, the catheter *broke in the middle*, leaving a considerable portion in the bladder. An operation was performed successfully for its removal. About fifteen days afterwards the patient's death occurred,—although not referred, by the gentleman giving the account, to the accident, or to the operation following it.

The catheter employed appeared to be sound, but was probably old, and had been used but once before.

Very respectfully,

HENRY HARTSHORNE, M.D.

MEDICAL SOCIETY OF THE STATE OF PENNSYLVANIA.

1400 PINE STREET, PHILA., March, 1874.

THE Annual Session will be held in the city of Easton on Wednesday, May 13, 1874, at 3 P.M.

The Address in Surgery by Thomas M. Drysdale, M.D., Philadelphia.

The Address in Medicine by T. H. Helsby, M.D., Luzerne.

The Address in Obstetrics by William B. Atkinson, M.D., Philadelphia.

Report of the Committee on the Regulation of the Practice of Medicine and Surgery. Chairman, Dr. R. L. Sibbet, Cumberland.

On Education of Deaf-Mutes. Chairman, Dr. L. Turnbull, Philadelphia.

On Care and Treatment of Insane Criminals. Chairman, Dr. John Curwen, Dauphin.

On Compulsory Vaccination. Chairman, Dr. Benjamin Lee, Philadelphia.

Secretaries of County Societies are requested to forward their lists of officers and members, with the post-office address of each member, to the undersigned, at their *earliest convenience*.

WILLIAM B. ATKINSON,
Permanent Secretary.

WE have received a copy of the CONSTITUTION AND BY-LAWS OF THE ALUMNI ASSOCIATION OF THE ALBANY MEDICAL COLLEGE, and have been requested to call attention to the following paragraph in an accompanying circular:

"Your attention is therefore asked to the subject, and a careful perusal requested of the Constitution and By-Laws—adopted by the Association—which accompany this circular. The Executive Committee desire that these may be placed in the hands of every graduate, and also propose making a complete catalogue of the Alumni. It is therefore necessary that their present residences be ascertained, and to this end all graduates are requested to send to the Secretary, *without delay*, their present addresses and also those of other graduates with whom they may be acquainted, especially of those in their immediate vicinity."

OFFICIAL LIST

OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U.S. ARMY, FROM MARCH 24, 1874, TO MARCH 30, 1874, INCLUSIVE.

PETERS, D. C., SURGEON.—Assigned to duty at Nashville, Tennessee. S. O. 43, Department of the South, March 21, 1874.

WEBSTER, WARREN, SURGEON.—Assigned to duty at Alcatraz Island, California. S. O. 29, Department of California, March 16, 1874.

HEIZMANN, C. L., ASSISTANT-SURGEON.—Relieved from duty with Sioux Expedition, and to resume his duties as Post-Surgeon at Fort McPherson, Nebraska. S. O. 42, Department of the Platte, March 23, 1874.

* Williams has since gone to Molokai.

SATURDAY, APRIL 11, 1874.

ORIGINAL COMMUNICATIONS.

FETID CORYZA.

BY J. SOLIS COHEN, M.D.,

Lecturer on Laryngoscopy and Diseases of the Throat and Chest, in Jefferson Medical College.

(Continued from page 419.)

TREATMENT.

THE treatment of a case of fetid coryza will depend upon its nature. When due to the presence of a foreign body, a rhinolith, or a morbid growth, the removal of the exciting cause will cure the discharge. In cases with constitutional taint, systemic treatment is required. The treatment of this condition, in fact, is simpler in principle than in practice; but it is always tedious, and often unsatisfactory. Palliation of the severer symptoms and diminution of the fetor can almost always be effected, but a thorough cure often requires months of persistent treatment; in some instances seeming almost unattainable, and in others, quite so. When the larger bones are diseased, and it is impossible to get access to them, the condition will continue for years; dead bone being exfoliated splinter by splinter, and fresh involvements becoming new sources of evil as older ones are undergoing amelioration.

In scrofulous cases we can endeavor to improve the tone of the constitution by resort to systemic remedies, such as cod-liver oil, quinine, and iron, the preparations of iodine, arsenic, and so on; and we may thus repress increase in the malady, even if we fail in restraining it. The administration of cubebs, preferably, in my own practice, in doses of fifteen to twenty drops, or more, of the oleoresin on sugar, after meals, will sometimes diminish the copiousness of the secretions to a certain extent, and modify their character by the local influence of the drug in its elimination through the mucous membrane of the nasal tract.

The decidedly syphilitic cases, when not so far advanced as to be irremediable, are much more manageable under systemic medication than are the idiopathic and scrofulous cases. Here small doses of the bichloride of mercury, with the free use of the iodide of potassium, are just as serviceable as in other forms of constitutional syphilis, especially if the general vigor of the patient has not been greatly impaired. If the general health is poor, a generous allowance of nutritious diet, assisted by a tonic course of treatment, will be necessary before beneficial results can be expected from specific remedies.

All forms of fetid coryza require local treatment. The parts should be frequently cleansed, and topical remedies assiduously applied. Without preliminary cleansing, local remedies are of little avail: they become entangled with the secretions to a certain extent, and cannot exert that good effect upon the parts which they exercise when applied upon a clean surface.

As mentioned in connection with cleansing the parts preparatory to examination, we use for this purpose the nasal syringe, applied anteriorly and posteriorly, and the continuous nasal douche; employing the medicinal articles already enumerated. These ablutions are by no means to be neglected, but should be attended to as punctually and as scrupulously as the patient attends to other wants of nature.

The local applications for remedial purposes consist of solutions, powders, vapors, and unguents, brought in contact with the parts by suitable appliances. When ulcerated surfaces can be reached by instruments introduced within the nostrils or behind the palate, they should be regularly touched by the sponge, cotton wad, or hair pencil, loaded with a solution of nitrate of silver, sulphate of copper or of zinc, carbolic acid, chromic, nitric, or muriatic acid, or the acid nitrate of mercury, as the case may seem to demand. Dead bone, where accessible, should be removed by the forceps, assisted, if need be, by the knife or scissors. Too much force should not be exerted in the endeavor to remove dead bone. It is better practice often to use frequent traction from side to side with forceps, in a sort of dislodging motion, so as to loosen the pieces of dead bone, and thus gradually render them sufficiently movable to be extracted without much physical effort. If the bone is too large for removal through the nostril in mass, it may be crushed between the blades of strong forceps, or divided by cutting-pliers, and be extracted piecemeal. In many instances the dead bone may be removed through the mouth by means of curved forceps passed up behind the palate.

The contact of the opposing surfaces of mucous membrane can often be overcome by the daily interposition, for an hour or more at a time, of strips of compressed sponge, or of tubes of laminaria; mechanical appliances which compress the parts as they imbibe moisture from the secretions, thereby favoring absorption of the products of submucous infiltration. Where hypertrophied or exuberant mucous membrane exists, and where internal compression is insufficient to enlarge the passage for the free ingress and egress of air and the free discharge of the secretions, it is good practice to twist off portions of the membrane with delicate forceps, so that cicatrization of the irregular edges of the wound may enlarge the passage. The free bleeding accompanying this procedure exerts a salutary influence upon the parts; and though the operation is very painful, it is so efficient in its relief that the patient will readily submit to it again and again, for the sake of the ease it affords in respiration afterwards.

The solutions used by douche or injection may contain chlorate of potassa, alum, creasote, or carbolic acid, permanganate of potassa, chloride of lime, or similar substances, which, in addition to their local action on the parts, tend to control fetor. Or we may use special injections or sprays of nitrate of silver, sulphate of zinc and of copper, the sulphocarbolates of zinc or lime, bichloride or iodide of

mercury, chloride of zinc, chloride of lime, and the like. These injections should be employed at least twice a day, night and morning, and, where practicable, three and even four times a day; and they should always be preceded by the use of the douche for cleansing-purposes. They should be used in weak dilution at first,—say two or three grains to the ounce,—and be gradually increased in strength as tolerance of them is manifested; care being taken that none of the solution is swallowed by the patient, on the one hand, and that too free use of remedies which act promptly on the system be not made, on the other; for the nasal mucous membrane readily absorbs certain remedies, and the proximity of the olfactory filaments to the nervous centre favors the systemic effect of others. This latter fact is often utilized to subdue the pain in the frontal region, by the local application of an ointment containing three or four grains of morphia, or one or two of the extract of stramonium, to the ounce; not more than the volume of a pea being used at a time.

A solution of the chloride of lime was used in this city, with great success, by Prof. Horner, who injected each nostril twice a day with a solution containing a teaspoonful of the chloride of lime in a wineglassful of water. This practice is not much in use to-day, but it deserves to be. A somewhat similar formula, from which I have sometimes obtained very satisfactory results, contains from thirty to sixty grains of the chloride of lime to the ounce of the decoction of krameria; of which two or three drachms, or more, diluted with an equal quantity of water, are injected into the nostrils night and morning, immediately after the use of the douche. Sometimes the parts will not bear a solution of this strength, and it must be diluted accordingly. When the remedy excoriates the external tissues, as it will do sometimes, its use must be suspended or its strength reduced, as may seem most judicious. Perhaps a preliminary coating with colodion will prevent this excoriation, but I have never tried it.

Glycerin is sometimes of great service as an injection, particularly in scrofulous cases. Being bland and unirritating, its affinity for moisture of all kinds facilitates the separation and removal of the secretions, inspissated crusts, and detached fragments of dead bone. The addition of iodine, in the proportion of a grain or two to the ounce of glycerin, is sometimes advantageous.

Prof. Trousseau relied greatly upon certain medicated powders to be snuffed up by the patient twice or thrice a day, after having cleansed the nostrils as thoroughly as possible. His principal formulæ were calomel, a drachm to the ounce of sugar, and red precipitate, forty grains to the ounce of sugar; their use being regulated in accordance with the irritation produced. Another favorite powder, with which he was very successful, was composed of bismuth rubbed up with equal parts of Venetian talc, and this, on account of its innocuousness, was used as freely as was desired.

Camphor, tannin, cubebs, and other substances, separately or in combination, have been used in a

similar manner; some practitioners mixing them with two or three times their bulk of Scotch or Welsh snuff. Various mechanical appliances are in use for the purpose of injecting the powders upon the parts.

Citrine and other ointments, more or less diluted, are sometimes used locally after thorough cleansing; being applied to the parts by the little finger, a hair pencil, or a cotton wad on the end of a wire.

The principal remedies used in the form of vapor are preparations of mercury, evaporated over a spirit-lamp, the fumes from which are drawn by inspiratory effort through the nostrils. The fumes of muriate of ammonia from the heated salt itself, or in a nascent state from commingling of the vapors of muriatic acid and strong aqua ammoniæ, are also used a great deal in the scrofulous cases, both for local and constitutional effects.

With all these resources at command, we are able to improve the condition of patients affected with fetid coryza, and place them under the most favorable conditions for the cure of whatever affection has given origin to this loathsome catarrh.

CAN "NUTRITIOUS ENEMATA" BE DIGESTED AND ASSIMILATED?

BY G. TROUP MAXWELL, M.D.,

New Castle, Delaware.

THIS article, or its material points, was published in the Savannah (Ga.) *Journal of Medicine*, November, 1866. It was so badly printed, and contained so many typographical errors, as to be scarcely intelligible to myself, and for that reason I republish it in the *Medical Times*.

The question whether food, in the form of "nutritious enemata," injected into the rectum, can be digested and assimilated in the large intestines, is one of not merely speculative interest, but involves, besides, points of practical importance; for the speedy, successful treatment of most of the lesions of the stomach and small intestines and of their glandular auxiliaries in the process of digestion may be much more easily accomplished when, in support of the judicious application of appropriate remedies, absolute rest from the performance of their function as digestive organs can be enforced.

I seriously doubt the efficacy of nutritious enemata, and in discussing the question shall endeavor to maintain—1, that digestion is a necessary preliminary to assimilation; 2, that digestion is begun and completed in that part of the alimentary canal which is above the ileo-cæcal valve; and 3, that the large intestines are not digestive organs, and neither do nor can perform the function of digestion.

That digestion is a necessary prerequisite to assimilation or nutrition, is a postulate which will require little or no argument to prove, as no one will seriously question or deny it. The universality of the existence of organs suitable for the performance of that function in animals from the lowest to the highest in the scale of being, is conclusive evi-

dence upon the point. An important distinction between the vegetable and animal kingdoms is that, whilst the former find their food consisting of inorganic elements in a fluid or gaseous state, in simple form, ready for absorption, the latter receive theirs as compound organized substances, which must be reduced, liquefied, and vitalized, and thus prepared for assimilation. To effect this result, organs more or less complex, according to the nature of the food to be acted upon, with certain secretions which are common to all animals, are provided. In the Graminivora a large and more complex mechanism is found, the function of which is to extract from the large bulk of food received into it the comparatively small amount of nutriment it contains; whilst in the Carnivora, the proportion of nutritious ingredients of the food being much larger, and the reduction and liquefaction of it much more easily effected, a set of organs proportionately small and simple is found. Whether the organs of digestion be large and complicated, or small and simple, certain secretions, known to be digestive fluids, are always present, and their essential importance in the digestive process has been demonstrated.

In support of the view that digestion is completed when the food, in its passage through the alimentary canal, reaches the ileo-cæcal valve, there is no lack of testimony. Dr. Dalton, in his great work on Physiology, says, "Digestion of the food is not a simple process, but is made up of several different processes, which commence necessarily in different portions of the alimentary canal. In the first place, the food is subjected to the physical operation of mastication and ensalivation. Reduced to a soft pulp and mixed abundantly with saliva, it passes secondarily into the stomach; here it excites the secretion of gastric juice, by the influence of which its chemical transformation and solution are commenced. If the meal consists wholly or partially of muscular flesh, the first effect of the gastric juice is to dissolve the intervening cellular substance, by which the tissue is disintegrated and the muscular fibres themselves become swollen and softened by the imbibition of the gastric fluid, and are finally disintegrated and liquefied. In the small intestines the pancreatic and intestinal juices convert the starchy ingredients into sugar, and break up the fatty matters into a fine emulsion, by which they are converted into chyle. Although the separate actions of these digestive fluids commence, however, at different points of the alimentary canal, they afterwards go on simultaneously in the small intestines. *Throughout the small intestines the secretions are intended exclusively or mainly to act upon the food, to liquefy or disintegrate and to prepare it for absorption.* But below the situation of the ileo-cæcal valve and throughout the large intestines the contents of the alimentary canal exhibit a different appearance, and are distinct in their color, odor, and consistency. This portion of the contents, or *feces*, is not composed for the most part of undigested remains of the food, but consists principally of animal substances *excreted by the mucous membrane of the large intes-*

tines." Says Dr. Flint, "It is now almost universally admitted that *the digestion of all classes of alimentary substances is completed either in the stomach or the small intestines.*" Magendie emphatically declares, "*I conceive that digestion is completed effectually without the large intestines taking any part in it.*" Professor Martyn Payne, in his voluminous "Institutes of Medicine," ascribes to the gastric juice "the principal agency in the assimilative process," and imputes to the saliva, bile, and pancreatic juice, auxiliary powers of a "problematical" character.

Digestion consists in the conversion of food, first into chyme, and next into chyle; that accomplished, digestion is "effectually completed." Chyme is produced in the stomach by the gastric juice; chyle is formed in the small intestines by the operation of the pancreatic fluid, bile, and intestinal juices. And Dunglison declares that "when the food has attained the lower part of the ileum the process of chylification is accomplished."

In proof of my last point,—that, perhaps, of chief interest and importance in this discussion,—the evidence is drawn both from the anatomical structure of the large intestines, and from the known facts which have been developed by physiologists as to their real functions. In the mucous membrane of the stomach are myriads of follicles, which secrete the most potent of the digestive fluids,—the gastric juice. In the small intestines are the pancreatic fluid and bile, the secretions of large glands, whose ducts terminate in the first division of the intestines, and the intestinal juices, which are the products of glands lying in the mucous membrane of the intestines, which decrease in number as the large intestines are approached. But in the large intestines there is nothing of the kind. *From the ileo-cæcal valve to the anus there is not a gland or a membrane that secretes a digestive fluid.* This is the testimony, I believe, of every anatomist who has written upon the subject.

In the stomach and small intestines food is to be digested, and there we find *secretions* or digestive fluids, fitted to disintegrate and liquefy the food, and thus to prepare it for absorption and assimilation; in the large intestines, on the contrary, we do not find *secretions*, but animal substances which are "*excreted by the mucous membrane.*" Nature has provided glands, which *secrete* digestive fluids in and near the portion of the alimentary canal which is above the ileo-cæcal valve, while she has denied them to the portion which is below that valve. Above are *secretions*; below, *excretions*.

Speaking of the large intestine, Magendie says, "It fulfils sufficiently well the office of a *reservoir*, where is deposited for a time the residue of the chemical operations of digestion, to be afterwards expelled."

And Dunglison says, "The large intestine acts as a reservoir and *excretory canal for the feces.*" Flint characterizes "the process of digestion which takes place in the large intestine as *unimportant*," and declares that "hardly anything but water is absorbed by its lining membrane." And Dalton, as we have seen, forcibly contrasts the appearance of the contents

of the small and large intestines,—their “color, odor, and consistency,” calling the latter “*feces or excrementitious matter*.” Thus we see that the function of the large intestines is neither to commence nor to complete the digestion of food,—the anatomy of the organs forbidding the exercise of any such function, and physiology testifying to the same fact.

Now, I think I may claim to have established irrefutably—1, that the complex process of digestion is an *absolutely necessary preliminary* to assimilation; 2, that this result is reached in the completion of chylification, before the contents of the alimentary canal pass the ileo-cæcal valve; and 3, that the large intestines do not and cannot perform the function of digestion, but that they act as a “reservoir” simply,—an “excretory canal” for the *feces*, whence they are after a time expelled.

Now, if these propositions are true, where is the sense of using so-called “nutritious enemata”? What efficacy can be derived from alimentary substances injected into the large intestines, *unless they can be digested*?

John Hunter called digestion “a species of regeneration.” It certainly is not simply a solvent process. Food is not only liquefied, but it is *vitalized* also. And if alimentary substances are injected into the large intestines, which have no power to *digest* them, they remain inert and dead, as much so as if they were put into a jug.

But, it is asked, may not liquids holding in suspension or solution the ingredients of food be absorbed by the large intestines, and subserve the purpose of nourishing the body? The answer is positive and unequivocal, No; it is only “*by admixture with the gastric juice and the intestinal secretions*,” says Dr. Dalton, that “*liquids holding in suspension the immediate principles of animals and vegetables become modified and rendered fit for assimilation*.” Food injected into the large intestine cannot, therefore, be assimilated, because the *necessary* “admixture with the gastric juice and intestinal secretions” *cannot take place there*.

Nor do the experiments of Dr. W. O. Leube, of Erlangen (*Med. Record*, from *Deutsches Archiv für Klin. Med.*), disprove or militate against the positions of this article, but, on the contrary, they confirm them; for by mixing pancreas with beef to effect *artificial digestion*, he assents to the proposition that *digestion is an essential prerequisite to assimilation*; and his endeavor thus “to transfer to the large intestines a part of the digestive processes which normally take place in the small intestine” is equally a confession “that the large intestines are not digestive organs,” etc. Digestion would be as thoroughly effected by the method of Dr. Leube in a retort as in the large intestines.

The error of supposing that food could be digested in the large intestines, when injected *per anum*, arose, undoubtedly, from confounding the phenomena of *absorption* with those of *digestion*, at a time when the latter were not so well understood as they have since become; and the error has been persisted in from want of due reflection. But absorption is a physical act, purely, whilst digestion is a complex process, both physical and vital.

In the summer or fall of 1856 I wrote a letter to the learned and distinguished Dr. Beuriet-Dowler, then editor of the *New Orleans Medical and Surgical Journal*, intimating a doubt as to the efficacy of nutritious enemata, and requesting him to discuss the question in that journal; I hoped to have the subject illustrated by his great research and enlightened views. In his reply, however, he published several lengthy extracts from European writers to prove that *medicines* injected into the rectum are absorbed, and produce their usual desired effects. Mistaking the object I had in view, and the direction I hoped to give to his investigations, he set about proving what I have never dreamed of questioning, and what every tyro in the profession knows and practises. *But medicines are not acted upon by the digestive fluids as food is*. They do not produce their remedial effects by being digested or assimilated. Whilst *food* must be liquefied and vitalized by admixture with the gastric juice and the intestinal secretions, and thus rendered fit for assimilation, *medicines* are absorbed unchanged, or in new combinations, and circulate in the vessels, until, like all extraneous matter, they are eliminated. *Medicines are not digested*.

Most medicines are poisons, if taken in sufficient quantity; and whether the amount taken into the stomach be less or greater does not affect the question of the influence upon them of the digestive fluids. Now, if a person is known or suspected to have had poison administered to him, either by mistake or designedly, a chemist does not hesitate to determine the question of his having been the victim of a criminal purpose or of an unfortunate blunder. Indeed, he not only determines the fact of poisoning, but he reveals the character of the agent employed. However subtle the instrument of death, or slow and gradual the process of introducing it, the skilful chemist, with his sensitive reagents intelligently manipulated, will disclose the facts of the case. The poison will be discovered in some organ remote from the stomach; perhaps in the very form in which it was swallowed. Although absorbed, it was not digested, and therefore could not be assimilated. Arsenic, strychnia, antimony, opium, etc., etc., have each—to the praise of a noble science, which has thus become the handmaid of justice, be it said—been thus detected.

Food, on the other hand, unlike medicines and poisons, is not only dissolved, but is digested, before it is absorbed. By admixture with the digestive fluids, animal and vegetable substances are reduced to a homogeneous, undistinguishable mass, when all the chemists in the world would find it an impossible task to determine the form or nature of the food which had been thus changed in its physical, chemical, and vital properties.

Some plausibility has been given to the notion that “nutritious enemata” have proved efficacious in sustaining failing strength, by the fact that persons to whom they have been administered, when food could not be received *per vias naturales*, have lived for several weeks. But cases must have occurred in the practice of many physicians where life has been preserved, apparently miraculously,

and no food has been taken in any way. I have in my mind the case of a child, seven or eight years of age, who, in 1870, lived through an attack of typhoid fever which lasted *ten weeks*, who did not allow a *drop of anything* to be received into her body for at least two-thirds of that time. Mr. S. F. Shallcross, President of the Levy Court of New Castle County, Delaware, has communicated to me the fact that his father, who is eighty-three years old, was, in the winter of 1871-72, sick with "*debility*," and that *for sixty-three days, or nine weeks*, during which he nursed his father, *his only nourishment* was "about two tablespoonfuls of brandy, and the same quantity of gum-water, in twenty-four hours." Dr. Burns, of Frankfort, attended the case. Had nutritious enemata been administered in either case, how naturally the remarkable tenacity of life would have been attributed to their nourishing and sustaining powers!

After long and mature reflection upon this subject, I am settled in the conviction that the use of "nutritious enemata," in our day, is one of the many illustrations which could be furnished of the fact that clinical practice does not keep pace with the advances of physiology and other correlative sciences.

NEW CASTLE, DELAWARE, March, 1874.

A SUCCESSFUL CASE OF TRACHEOTOMY FOR CROUP.

Read before the Philadelphia County Medical Society, Dec. 24, 1873.

BY M. O'HARA, M.D.

I WAS called, on Wednesday night, November 19, to see Fannie P., aged 3 years and 8 months, a healthy child suffering with all the symptoms, according to books and teaching, of pseudo-membranous croup. She went to bed well, and arose Monday morning with croup and catarrh; to the latter she had been prone since an attack of measles, a year or so previously. She had never had an attack of croup before, and received home-treatment, in spite of which she steadily grew worse.

There was, at my visit, fever, croupy cough, catarrhal sounds in right bronchus, but no membranous deposit was visible in the throat. The tonsils and arches of the palate were congested and swollen. There was, at times, a spasmodic closure of the laryngeal orifice, but also a gradual and persistent narrowing. The larynx was tender. Her appetite was good, and she took nourishment well. The cough was hoarse, somewhat suppressed. Respiration was audible, and becoming more difficult. I thought surgical aid was required, and stated so to her parents, basing my opinion on the rapidly progressive apnoea and the commencing exhaustion. I had lost a case similar to this, and the temptation was strong to have tracheotomy performed at once. I, nevertheless, wished to try in full all the resources of medical art,—steaming with lime-bath, emetics, hot sponging to the larynx, saturation with alkalies; these relieved somewhat the urgency of the symptoms during Thursday. Thursday night things looked badly, and Friday morning an operation was demanded.

Drs. Carroll, J. H. Grove, and Dr. O'Neill agreed, at 9 P.M., that an immediate operation was necessary to save life; but the parents still refused, and treatment

was continued during the night. Mercurials were given, and the gums touched. At 8 o'clock on Saturday morning, November 22, the operation was skilfully performed by Dr. Grove. Immediate relief followed, the tube was introduced, and respiration was performed naturally. Anæsthesia was effected by chloroform and ether. Their use seemed to me questionable, in the already paralyzed condition of the breathing apparatus. As chloroform, in a recent coroner's jury in Boston, has been denounced, we ought at least to use only ether to be safe from law-suits. There was a moment of syncope, which seemed like death, but the rapidity of Dr. Grove in letting air into the lungs saved life.

The father, constantly present, day and night, to nurse, was taught to remove the tube for cleansing. The inner tube could not be used, as air sufficient could not be carried with it in place. The child was placed in an apartment partitioned off by hanging counterpanes. A saucepan also of slaking lime was kept in the room, and steam from boiling clothes in a wash-boiler, the latter a practical suggestion of Dr. Cohen, worthy of recollection. The patient was kept upon veratrum viride and citrate of potash, with quinine. In consequence of the ten hours' delay from night until morning asked by the parents, the dyspnoea had steadily increased, and at each inspiratory effort there was recession of the base of the thorax, a sulcus around the chest; in fact, just before the operation the recession of the lower part of the sternum and epigastrium might be called almost permanent. There was some hissing laryngeal stridor, and auscultation and percussion showed that collapse of the lower part of the lung had taken place, and this was not observed the night before. There was also scattered lobular condensation or congestion of the lung. Treatment was instituted to prevent pneumonia and bronchitis. The child did well until the night of the 23d, when it showed a feverish oppressed condition, with dyspnoea and exhaustion. The symptoms were alarming, and Dr. Grove was summoned. The tube was at once removed, and found to be sealed with a cement-like substance almost completely. This was removed and the tube replaced, when respiration went on naturally, and the symptoms were relieved. Care was taken to cleanse the tube thoroughly by passing through it a piece of tape.

Dr. Pancoast uses no canula in his cases, but makes an opening by excision, which he keeps free with a piece of lead wire. If it were possible to do this in all cases it would be safer. The tube demands great attention, and in this case required to be retained a month.

The wound kept healthy, sweet oil being the only dressing. No gauze was used over the orifice, but the use of vapor was continued the whole time. No false membrane could be detected. Only liquid food was allowed, and hot poultices were kept constantly applied to the chest.

November 24.—Chest-symptoms are better. Poultices continued. Diaphoretics and quinine are now given. No air as yet passing through the larynx.

November 25.—Up to this time the larynx has been completely occluded, but to-night some air comes through, accompanied by the old croupy sound. The patient took bread to-day: the crumbs, however, produced irritation and choking, which was relieved by a drink of water. The discharge through the tube is less, thinner, and can pass through by the ordinary expiratory effort, though at times it accumulates below the tube and must be removed. Crepitation and bronchial râles still give evidence of some lung-trouble.

November 29.—The seventh day after the operation; the patient weak, and has no appetite. Suspended quinia and fever-mixture, and ordered vegetable tonics and wine whey. The wound is very contractile; tube

has to be replaced rapidly. There is always an increasing vent in the larynx from cough when she drinks fluids. Removed the canula, and replaced it with a larger double tube.

November 30.—Laryngoscope shows the absence of swelling and membrane.

December 1.—Some fever; erythematous redness of one cheek, bronchial râles and congestion of the lower part of the left lung. Ordered magnesia; resumed poultices and diaphoretics.

December 2.—Patient is better; takes eggs, milk, corn starch, oyster soup, etc. Ordered castor oil. On this, the twelfth day after the operation, by closing the orifice, she can articulate for the first time, but the exertion soon fatigues her. Takes two ounces of wine daily. Suspended veratrum viride and diaphoretics; continued tonics.

December 3.—Catarrhal symptoms increased. Had a poor night. Considerable vent in the larynx. Articulates, but with greater croupy sound than yesterday. Much thick muco-purulent matter collects below the tube. From this time the patient did well. On December 16, the twenty-fourth day after the operation, she was practically well. Examination with the laryngoscope showed, as always before, no sign of membrane.

Remarks.—I have called this pseudo-membranous croup, not because we saw no membrane, but because all authorities, by their detail of symptoms, would force us to class it under that head. I have consulted Meigs and Pepper, Reynolds, Aitken, Wood, etc.: they are very diffuse on the subject, but confused. Most of them, as Aitken, define it as a specific disease with exudation on mucous membranes, indicated by alteration of respiration, cough, hoarseness, and laryngeal spasm, to terminate in suffocation or exhaustion. He recommends tracheotomy early, if respiration is so impeded that the demand for oxygen is only satisfied by difficult and forced respiration, or if the patient is becoming exhausted, and not to wait for asphyxiation. He speaks of an insidious form, coming on more slowly, with weariness, weakness, and restlessness, anxious startings out of short slumbers, loss of consciousness, pallor of face, approaching to œdema; in this kind of croup, delay must especially be avoided. The case just narrated had this train of symptoms. Meigs makes three kinds of laryngitis: catarrhal without glottic spasms, spasmodic simple laryngitis, and pseudo-membranous, including in this diphtheria. He makes a grave form of the simple laryngitis, which ensues in death. He is not very clear in distinguishing this from pseudo-membranous, nor, in fact, can it be distinguished. The only certain sign is the presence of false membrane. In the case just narrated there was no membrane seen; yet authors tell us that this is no proof that it is a case of simple inflammation. Meigs and Pepper say that in membranous croup there is a slow, steady, unrelenting progress of the symptoms. This was the case in this patient, together with altered and suppressed voice, dyspnoea, and stridor. She had mainly a continuous increasing obstruction to the entrance of air in the larynx, the cause of which remained until the thirteenth day after the operation, during which time it seemed to be, at least for a few days, completely closed. Again, Flint and Jacoby give, as a test, that in membranous croup

dyspnoea exists both in inspiration and in expiration; in catarrhal croup it is chiefly in inspiration. This case also bears this test, and we are constrained to call it pseudo-membranous, although the existence of membrane was extremely doubtful. In the typical case of recovery under Prof. Meigs's care there was abundance of membrane visible, and recovery complete on the ninth day. Recession of the sternum and epigastrium during inspiration and a deep sulcus around the base of the chest are given by the books as a mark of pseudo-membranous croup. I think this should be laid down as an indication for tracheotomy, but as no evidence of membranous deposit. Any kind of obstruction of the larynx will produce this from atmospheric pressure on the outside of the chest, the counterbalancing pressure within being removed. Auscultation is not to be relied upon, though it was of great service in this case. Too many mistakes have been made by experienced auscultators, where pseudo-membranous croup was diagnosed, while post-mortem examination showed nothing to account for death. Hartshorne, in his "Essentials of Practice," is clearer than others, in stating that the pathological elements of croup are spasm, congestion, or hyperæmia, and inflammation, either ordinary or diphtheritic. A purely inflammatory case without spasm is very rare. Pseudo-membranous does not differ from inflammatory, of which it is only a grade or termination. *Tracheotomy*, of itself, is attended with very little danger, and should be performed oftener and earlier. There is too much prejudice against it at present. When death occurs it is from tissue-alterations, blood-poisoning, etc., and not from the operation. In this case, ten hours' delay, although it was the fifth day, gave us some bad symptoms to contend with after the operation. Many cases of ill success are due to neglect in after-treatment, such as neglect of the tube, blood-poisoning, disease of lung induced by delay. Such cases should be eliminated from statistics, or the statistics thrown to one side altogether. I think the physician criminally negligent who fails to perform the operation if it is in his power. The saving of this child's life brings to me self-satisfaction, though the practical part of the work was performed by Dr. Grove, to whose unremitting kindness, solicitude, and skill I owe so much, and to whom here publicly I wish to render thanks. I also feel indebted to the kindness of Dr. Cohen, who on several occasions endeavored to determine whether this was a case of false-membrane croup or true-membrane croup, or whether it was simply, as Reynolds describes, a case of croup.

BELLADONNA IN INTESTINAL INVAGINATION AND HERNIA.—M. Gallicie (*La France Médicale*), in a paper on belladonna, says it is the special medicament for intestinal invagination, strangulated or not, as also for strangulated hernia. It acts on both the spasmodic and inflammatory elements. In both cases, however applied, its first effect is to alléviate the intensity of pain and to diminish and arrest the vomiting.

NOTES OF HOSPITAL PRACTICE.

BELLEVUE HOSPITAL, NEW YORK.

CLINIC OF PROF. L. A. SAYRE.

FRACTURE OF CLAVICLE.

FRACTURE of clavicle, which this man has, is one of our most common fractures, yet is most difficult of treatment, as is indicated by the endless variety of apparatus suggested for its adjustment and retention. Dr. Paul Eve, of Nashville, Tennessee, has even resorted to cutting down on the fractured ends and wiring them together. In fractures we have one general law of treatment: extension and counter-extension in the proper direction until accurate adjustment, then retention. In these cases, for several years I have used, with marked success, two strips of strong adhesive plaster (Maw's moleskin), without any axillary pads, three or four inches wide, one long enough to surround the arm and go completely around the body, the other to reach from the sound shoulder around the elbow of the fractured side and back, to the place of starting. The first piece is passed around the body below the axillary margin, and is pinned in the form of a loop sufficiently large to prevent strangulation, leaving a portion on the back of the arm encased by plaster. The arm is then drawn *downward* and backward until the clavicular portion of the pectoralis major muscle is put sufficiently on the stretch to overcome the sterno-cleido-mastoid, and thus pull the inner portion of the clavicle down to its level. The plaster is then carried smoothly and completely around the body and pinned to itself on the back, to prevent slipping. This first strip fulfils a double purpose. First, by putting the clavicular portion of the pectoralis major on the stretch, it prevents the clavicle from riding upward; and, second, by acting as a fulcrum at the centre of the arm when the elbow is pressed downward, forward, and inward, it forces the other extremity of the humerus, and with it the shoulder, upward, outward, and backward. It is kept in this position by the second strip, applied as follows: commencing on the point of the shoulder of the sound side, drawing it smoothly diagonally across the back to the elbow of the fractured side, where a slit is made in its middle to receive the olecranon; a soft piece of muslin over the joint of the elbow is of advantage. Before applying the strip my assistant presses the elbow well *forward* and inward, and retains it there while the plaster is continued over the elbow and fore-arm, pressing the latter close to the chest and securing the hand near the opposite nipple, crossing the shoulder at the place of beginning, and there securing by pins. My patient can be well shaken and no displacement occur. If any slack occur it should be taken up at once. I dressed a lawyer in this way who fell near my office at 9 A.M., and he was pleading his case in open court at 11 o'clock. Bandages do not stick, but slip around the body and give no firm support. Never warm the plaster. Sternal dislocations of this bone are also to be treated in this way, with the addition of a third piece of plaster, and a pad over the point of displacement. The strip passes diagonally across the shoulder and body, and its ends are secured to the first piece, or both.

HIP-DISEASE.

Case I.—Girl, 12 years old; hip-disease, with open sinuses; marked deformity; too feeble to walk. Born of healthy parents, and one of a large family of stout children. Fell from stoop five years ago and injured the left hip; confined for two years in an Institution for the Relief of Cripples, in this city, where only constitutional means are used,—bark and mercury: no attempt

was ever made by extension to relieve her sufferings or deformity; the head and neck of the femur are destroyed and the acetabulum perforated. Authors term this the stage of luxation, but of my forty-seven cases of excision I have yet to find one luxated. The capsular ligament is not ruptured, but is displaced,—the edges of the acetabulum having been absorbed by the constant pressure of the end of the femur, which is within the capsular ligament and enlarged acetabulum.

My plan of excising the hip-joint is as follows. Take a short, strong knife, send it home to the bone at a point midway between the anterior superior spinous process of the ilium and the top of the trochanter major; carry the knife downwards in a slight curve until you reach a point opposite the trochanter minor, not passing over the centre of the trochanter, but half-way between its centre and outer border,—the incision should be six or eight inches long; boldly divide all tissues and the periosteum, and do not dissect as for hernia. Opposite the trochanter minor divide with a probe-pointed bistoury the periosteum as far around the bone as possible, at right angles to the first incision, and at its lower limit; a knife is used to cut the rotators attached in the digital fossa;—peel off all the periosteum carefully and effectually, from the diseased bone; by adducting the limb slightly, the bone is denuded of periosteum down to the trochanter, where a chain or metacarpal saw divides the shaft; several sections are often needed to reach sound bone; this is done by pushing the ends of the femur through a slit in the periosteum. In this case two sections are made—the last three inches below the trochanter minor,—when we come to good bone; we then gouge out the diseased bone from the acetabulum, wash out the wound, and fill it with balsam of Peru and oakum, thus allowing more space for new bone, the periosteum being left intact. Never leave the trochanter major; it would plug up our drain-pipe from the diseased acetabulum. Free drainage is essential to success; hence use oakum, and by no means lint or cotton. In this case the head and neck are absorbed, and the trochanter major is rounded off by deposits of new bone, thrown out around the specimen removed; almost a perfect involucrum. Efforts at repair have encased the dead bone, and the patient would have died before its removal by nature; ankylosis existed, due to these new formations attached to the ilium. Place the patient in "wire breeches"—a machine consisting of wire frame, which encloses the body from head to feet, fixing immovably the whole lower half of the body. The sound limb is secured to one leg of the machine,—care being used to stiffen the knee, thus fixing the pelvis,—the lame limb is extended as far as the contracted muscles will allow, and is held by two strips of plaster carried from the ankle to the femur, and secured by a roller; the plaster is brought down around the foot-piece, which works on screws, so that the limb is extended gradually; a roller is then passed over the limb and pelvis, around an arm of the instrument, to act as a perineal band, keeping up constant counter-extension. Pad all points of pressure, and have the anus fit well to the crotch of the breeches. Now the patient is ready for fresh air; our best results have been those exposed freely out-doors. To test the necessity for dividing contracted tendons or muscles, put the tissues on the stretch, and make point-pressure with the finger: if reflex spasm occur, cut, for the part is contracted; if no spasm result, do not cut, as the part will stretch, it is only contracted. In using extension it must be from the femur; have the plaster come above the knee. London surgeons magnanimously acknowledged their failures in hip-disease to be due to not having their extension from above the knee, which was also frequently the cause of synovitis of the knee-joint.

Case II.—Boy, 13 years; third stage, hip-disease; excision performed June, 1873. Waxy liver, spleen, and

kidneys, developed during the progress of the disease, with general anasarca and abundant urinary casts, caused us to refuse exsection; but we subsequently operated with the slight hope that there remained enough healthy tissue in his organs to sustain life. The result has been good: the hip is well, and the deformity lessened. A principle has been established by this and other cases: remove the cause of disease consequent upon hip-joint disease or other exhausting trouble, and you have a prospect of good recovery.

Cases III. and IV. illustrate nature's exsections; fearful deformity presented. This young man suffered eleven years with hip-disease; his thigh is scored with sinuses; ankylosis is complete; the whole femur is diseased. I will remove the dead bone at its lower portion,—leaving seven or eight inches' shortening. This serious result could have been avoided by exsection ten years ago. This girl has had twenty sinuses; two are still open, and dead bone can be detected; there is much shortening; the adduction is so great that the inner sinus cannot be well cleaned; ankylosis was feared, but the pain and tenderness to-day, from handling it yesterday, make us safe in concluding that motion, though slight, was made. A long splint from pelvis to foot, with a hinge-joint, and worked by screws attached to a platform on the pelvis, best allowing abduction and rotation of the limb to be made, will overcome this deformity; passive motion will break up the ankylosis. Otto & Reynolds, 64 Chatham Street, are making one. This splint was first used by me, and with perfect success, in 1868, for a like trouble.

Case V.—This young man has taken prizes in skating since I exsected the head and neck of his femur in 1864. (The class unable to tell which limb had been diseased.) The new joint is perfect.

Case VI.—Girl; first stage of hip-disease, advancing into second. Limb slightly abducted; gluteo-femoral crease less marked than its fellow on sound side. Pelvis has assumed an oblique position; natural rotundity of gluteal muscles diminished, knee slightly bent. My rule for the normal standard of position from which comparison is made in forming our diagnosis of this disease is as follows: Place the patient on her back upon a hard surface, limbs parallel to each other, in continuation of long axis of body, spinous processes touching the table, pelvis fixed; draw a line from the sternum over the umbilicus to the pubes; another from one anterior superior process of the ilium to its fellow; the lines will intersect at right angles if the trunk and pelvis bear their normal relations to each other; if no obstruction exist at the joint the leg can be extended perfectly straight, the popliteal space touching the table. The position in which the diseased limb must be held to give comfort to the patient while the sound limb and pelvis are thus fixed, is the deformity indicating the stage of disease. This deformity is due to tension in the joint from effusion and muscular contraction, the result of reflex irritation—or to complete muscular rigidity. Many such cases are treated by mercury, blisters, cod-liver oil to relieve constitutional tendencies; the joint finally abscesses, and dead bone occurs, as seen to-day. In a majority of cases the head and neck of the femur are destroyed; imprisoned dead bone remains to irritate, constantly aggravated by muscular contractions forcing the end of the bone through the diseased acetabulum. All these cases are decidedly benefited by judicious local treatment. Some authors do not support it. Dr. Ashhurst, one of our best critics, says that local treatment is wrong, and expresses the wish that a new Abernethy would arise to revive and recommend general constitutional treatment. I believe and know that the man who can adjust an apparatus to this hip in a way to give perfect comfort to it, and prevent deformity, and permit the child to get out-doors where it can obtain all the reviving and tonic influences of fresh air and sunlight—that man is the true Abernethy.

Such treatment is worth more than all other forms combined; worth all Abernethy's potions and pills put together!

T. S. SUMNER, M.D.

TRANSLATIONS.

USE OF BATHS IN TYPHOID FEVER.—The use of cold applications in typhoid fever may be made by means of affusions or of the cold bath.

The first of these are indicated in adynamic cases, accompanied by profound intellectual torpor, etc. They act by exciting, so to speak, the reflex activity of the respiratory and circulatory centres, and dissipate those conditions which depend more upon faulty innervation than upon elevation of temperature.

The cold bath, on the other hand, is indicated where it is desired to subtract from the economy a certain amount of caloric, the augmentation of which might prove fatal to the patient.

Brand, of Stettin, one of the earliest advocates of cold baths in typhoid fever, recommended their use every three hours, day and night, the patient remaining in the bath, which had a temperature of 68° Fahr., twelve minutes.

According to him, it is not sufficient to lower the already augmented temperature; it should not be allowed to become elevated.

The effect of cold baths on a healthy person is only temporarily to lower the temperature, and that to a limited extent. The spasmodic contraction of the peripheral vessels drives the blood to the deep cavities, where loss of heat by radiation is prevented to a certain degree, while its production is at the same time augmented, as the amount of carbonic acid exhaled testifies. Then the period of reaction quickly dissipates the effect of the cold application.

On the contrary, it is comparatively easy to lower the temperature of a fever-patient, and this is done not by moderating combustion, but by increasing waste, an action diametrically opposed to that of quinine and alcohol remedies, which address themselves to the former purpose.

The two results of the action of fever in the economy—rapid waste of tissue and elevation of temperature—have their dangers, and carry with them indications for treatment. In hectic fevers the danger is from waste of tissue, not undue elevation of temperature; here no one thinks of using baths. On the other hand, in acute pyrexia the danger is less from waste of tissue than simple elevation of temperature. The whole group of ataxic and adynamic phenomena occurring in such cases depends, doubtless, upon the pernicious action of an overheated blood on the nervous centres.

It is in these cases that the most important point to be gained is the rapid cooling of the blood,—an indication which hydrotherapy alone can fulfil.

Without doubt the application of cold awakens the reflex activity of the pulmonary vessels, just as it reanimates the cutaneous functions and dissipates passive congestions.

While Brand accepts no contra-indications to the employment of cold, except intestinal perforation, Wunderlich advises baths, warm at first, the temperature of which is gradually lowered by the admixture of cold water, in cases attacked by profuse diarrhoea, albuminuria, heart-troubles, or in the case of pregnant women.

Wunderlich regards intestinal perforation, hemorrhage, and collapse, as contra-indications; we cannot partake of this view in the latter instance, and believe, on the contrary, that immersion baths as well as cold affusions are the best agents to prevent that tendency

to paralysis of the vasculo-respiratory centres which is the primary cause of collapse.

A case recently occurring in our wards illustrates this point. A young girl, attacked by typhoid fever, was found one morning menaced with collapse. The nose and the extremities were cold; the axillary temperature was 96.8° Fahr.; the pulse was thread-like, almost imperceptible. Half an hour after the administration of the cold bath the patient had warmed up, the pulse and temperature were raised, and all traces of collapse had disappeared.

What are the advantages, then, of this treatment which has gained such general acceptance, and which in Germany is employed almost to the exclusion of every other therapeutic resource?

It may be asserted that the administration of several cold baths in twenty-four hours will often control and cut off a febrile movement which to all appearances is likely to be violent and tedious.

While fulfilling the indication of lowering the temperature, this treatment at the same time affects favorably the entire group of symptoms proper to the typhoid pyrexia. The nervous centres are first influenced, the delirium is dissipated, the intellectual torpor disappears, and even, in some cases, the subtsultus tendinum and other indications of profound nervous perturbation. The action of the respiratory centres is also favorably modified, inspiration is deeper, softer, and stronger, and the bronchia recover their contractility, throwing off the products of secretion which obstruct them. The circulation of the blood is also improved, the skin becomes soft, tympanites diminishes, and the secretions become more normal.

One single objection may be stated in regard to the use of cold baths in typhoid fever,—namely, that internal hemorrhages are favored thereby.

In 257 cases treated by the cold bath, 18 cases of hemorrhage occurred, or 7 to 100; while by the ordinary treatment, hemorrhage occurs only in 3 to 4 cases per 100. Wunderlich, however, is inclined to doubt that the hemorrhage in these eighteen cases was due to the use of cold baths, since it only came on some hours after their use, when the internal congestion no longer existed. Finally, in none of these cases was the hemorrhage serious, and they all resulted favorably. —*Bull. Gén. de Thérap.* (Prof. Béhier). A. V. H.

OPERATION FOR ARTIFICIAL VAGINA.—Prof. Dolbeau relates, in the *Bull. Gén. de Thérapeutique* for February 15, 1874, a case of congenital absence of the vagina occurring in a girl of twelve who came under his care in the Hôtel-Dieu in 1866. Examination showed the external organs apparently normal, the uterus in position, but no connecting canal. As the child had been suffering for some weeks previous from acute abdominal pains occurring at intervals, an operation was decided upon and was successfully carried out, whereby an artificial vagina was created. At the completion of the operation some dark clots were evacuated from a sort of pouch around the neck of the uterus. By the introduction of the fingers every other day, and later by the use of a metallic bougie when it was found there was danger of its becoming sealed, the canal was kept patulous. Subsequently, this was abandoned, menstruation became regularly established, and six years later the girl was married. Dr. Dolbeau some time afterwards delivered her of a seven months' child, born dead, but of quite large size. The delivery was easily accomplished, excepting that a cicatricial ring, which had to be divided, was found in the upper third of the vagina. The woman's health remained good up to the date of the report.

Dr. Dolbeau concludes that the artificial vagina created in the pre-rectal cellular tissue became capable

of assuming the characters of a mucous cylinder, that coitus was easy, that fecundation was the result, and, finally, that accouchement presented no serious difficulties. A. V. H.

CURATIVE EFFECT OF ERYSIPELAS UPON SYPHILIS.—M. Mauriac believes that, under certain circumstances, erysipelas may exercise a more or less curative effect upon certain of the lesions of syphilis. In support of this view he brings forward two cases, in the first of which the patient, when first brought under his notice, presented mucous patches upon the tonsils, palate, lips, etc.

After undergoing cauterization of these patches, the patient was attacked by erysipelas, which invaded the entire face. Within five days the syphilitic lesions had entirely disappeared.

In a second case, which presented not only mucous patches in the mouth, but also an ecthymatous eruption on the body, an attack of erysipelas of the scalp caused the disappearance of all syphilitic symptoms.

M. Mauriac does not, however, contend that this effect of erysipelas is more than temporary, and he adds in conclusion that the development of this disease is not always a favorable omen for the cure or amelioration of cutaneous syphilitic manifestations. It may, on the contrary, become an aggravating circumstance, when the disease takes a malignant form or has arrived at a cachectic stage.—*L'Union Méd.*, No. 14, 1874. A. V. H.

INFLUENCE OF CEREBRAL LESIONS ON THE LUNGS.—*L'Union Médicale*, No. 14, 1874, contains an abstract of a paper by M. Aug. Ollivier on the production of hemorrhages and other affections of the lungs consequent on cerebral lesions. His observations showed congestion more or less intense, with occasional sanguineous effusion into the pleura and apoplectic centres, either scattered through the entire lung or showing themselves at various points.

These alterations were observed to occur in the lung corresponding to the hemiplegic side, and occurred more frequently following a cerebral lesion located at the base of the brain or influencing it, whether this lesion were hemorrhage, tumor, or softening.

M. Ollivier is disposed to attribute the cause of these lesions to a vaso-motor paralysis, and classes them with the vascularity of the skin and elevated temperature on the affected side which are observed in similar cases. A. V. H.

HYDRATE OF CHLORAL AND MORPHIA IN ECLAMPSIA.—Dr. Condereau, in a letter recently published in the *Bull. Gén. de Thérapeutique*, relates two cases occurring under his observation in which the combination of these remedies was found very satisfactory.

The first was that of a woman 23 years of age, attacked at the end of her first pregnancy by convulsions. Hydrate of chloral alone in the dose of one drachm had proved of no avail, when the addition of a hypodermic injection of three-fourths of a grain of muriate of morphia, succeeded in a few minutes by thirty grains more of the chloral, was followed by almost immediate relaxation without return of the convulsions.

The second case was that of a man 24 years of age, who had been subject to occasional but severe epileptic attacks, accompanied by furious mania, sometimes lasting for days. The hydrate of chloral had been used in this case, also alone, but was not found effectual until combined with a hypodermic injection of the muriate of morphia. The dose of the latter was, as in the other case, three-fourths of a grain, followed in a few moments by a drachm and a half of chloral hydrate. The result was very satisfactory, the convulsions being almost entirely controlled. A. V. H.

PHILADELPHIA
MEDICAL TIMES.
 A WEEKLY JOURNAL OF
 MEDICAL AND SURGICAL SCIENCE.

The Philadelphia Medical Times is an independent journal, devoted to no ends or interests whatever but those common to all who cultivate the science of medicine. Its columns are open to all those who wish to express their views on any subject coming within its legitimate sphere.

We invite contributions, reports of cases, notes and queries, medical news, and whatever may tend to increase the value of our pages.

All communications must bear the name of the sender (whether the name is to be published or not), and should be addressed to Editor Philadelphia Medical Times, care of the Publishers.

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EDITORIAL.

WANTED—AID BY A DISTRESSED COMMUNITY.

WE are thorough believers in the power of women: in their weakness, or rather by their weakness, they move the world for good or for evil as the case may be. The life-long training of the housewife of course fits her to see at once in public institutions faults as to cleanliness, cooking, waste, etc., which are only detected with difficulty by the average man, or more often altogether escape his inspection. Far more important attributes in fitting ladies for the work of supervising hospitals are a peculiar moral fitness, and in most cases an endless supply of leisure. The possession of the latter is of itself a necessity for success to the would-be reformer; and how seldom can men of prominence in this country boast that they are rich in this needed commodity! With a naturally quick sympathy which when fairly aroused dominates everything,—with a power of self-sacrifice that is very rarely possessed by the sterner sex,—with a gentle persistency which no rebuff daunts and which no obstacles can successfully resist,—no wonder woman often is to the poor wretches in the hospitals and almshouses as an angel from heaven, acting in a quieter sphere the rôle of a Florence Nightingale, and exercising, perhaps in an almost equal degree, those qualities which have filled the world with her renown. There is one institution in this city which we believe to be beyond the power of man to improve,—an institution which,

while it might be deemed a wonder of charity in Dahomey, is in a Christian community a standing disgrace. The readers of our columns need scarcely be told that we refer to the Philadelphia Hospital. The only hope of reform seems to us to lie in a visiting committee of ladies who are socially of such standing as to give weight to their words,—morally of such calibre that they will not flee from appalling scenes of suffering or of neglect, but be nerved by them to persistent efforts,—physically of sufficient presence to withstand the bodily labor and the tax that sympathy lays. Under the periodic visitation of such a committee we believe very much would be accomplished in a very short time. Why some of the active spirits so prominent upon anti-vivisection and other committees for the protection of the “higher animals” cannot stoop to aid the poor unfortunates of their own kind, we cannot tell. We can only pray that a morsel of the energy and effort put forth may fall to Lazarus. We have thought that Bellevue Hospital, New York, alongside of our Philadelphia Hospital, is a monument of mercy, a paradise among hospitals: yet the visiting committee there is doing wonders, if we may believe a writer who seems to know what he is speaking about. He says (*N. Y. Tribune*, March 26),—

“First, then, be it said, that Bellevue Hospital, though without soap during two weeks in January; though at times three patients have slept on two beds, five patients on three beds, and many have slept on the floor without blankets and pillows; though in the lying-in wards during January there were no towels, and not a sufficient supply of clothing to keep babies and mothers clean,—though all these things have been, Bellevue Hospital is in a more seemly condition than ever before, and, thanks to the Training School for Nurses, takes better care of its sick. So radically has it been reformed that, in spite of official opposition, it promises to be reformed altogether.”

Why cannot official opposition and official inertia be met here by a visiting committee?

THE touching solicitude shown by the members of our Obstetrical Society to educate New York up to its own high standard is something truly remarkable; especially since it is not generally supposed that New York needs such instruction. Unless we are wrongly informed, some very good works on that branch of medical science have from time to time appeared from the pens of New York physicians, and it would seem difficult even by flooding them with the Society's papers to make

them acknowledge their own inferiority. Can it be that the learned Society, when by its researches it has brought forth some new and valuable matter, fears to impart it to its neighbors, "lest they become as gods" also, and chooses rather to lose its work in the busy whirl of the Western metropolis, as he who, made wretched by the possession of unwanted riches, sinks them in the ocean to relieve his mind of care?

It seems strange that while we have a journal acknowledged to be fully alive, and representing as none other does the talent and worth of our schools, its pages should not be allowed to present any record of the meetings and transactions, the papers and debates, of one of our principal societies. Is the learned body bound hand and foot by the Manhattan Delilah?

"Down the river did glide, with wind and with tide,
A pig with vast sobriety;
And the devil looked wise as he saw how the while
It cut its own throat. 'There,' quoth he with a smile,
'Goes Philadelphia's Obstetric Society.'"

SOME weeks since, in a book-notice, we took occasion to anathematize the American habit of pirating English books. This has given origin to the letter printed below. We did not say that the book was pirated, but only stated that it had the appearance of having been so. We are very glad to see that constant dropping has worn away stone; that under the steady fire of the medical press the publishers are beginning to acknowledge that even authors have rights; and we sincerely trust that the habit of stealing other men's property will soon be a thing purely of the past.

11 NEW BURLINGTON STREET, LONDON, W. }
17th March, 1874. }

TO THE EDITOR OF THE PHILADELPHIA MEDICAL TIMES:

SIR,—We are glad to be able to inform you that the American reprint of "Lectures on the Clinical Uses of Electricity," by J. Russell Reynolds, reviewed in your number of 28th of February, is not, as you fear, a pirated edition, but has been published by Messrs. Lindsay & Blakiston under an arrangement satisfactory both to the author and to

Your obedient servants,

J. & A. CHURCHILL,

Publishers in England of the said work.

WE see by the Annual Report of the Episcopal Hospital that a contract was entered into last summer for the erection of the east wing of the building at a cost of \$111,500, and that the foundation-walls of the building are all finished. Of the required amount \$61,000 have been already

subscribed, leaving \$80,000 still to be raised for the completion and furnishing of the wing. Situated in a distant and formerly neglected part of the city, among a population probably needing hospital accommodation more than any other of our city, this institution has done an excellent work, and we trust that it will be liberally furnished with all that it needs to enter upon a career of increased usefulness.

THE old civilization of the British Islands does not seem to differ very much from the newer civilization of this country, in that it considers killing no murder, provided it be done by quacks. Thus, we learn from the London *Lancet* of March 14 that a roadside "professor" who killed a young man by giving a fatal dose of arsenic for a cough was, after conviction, sentenced "to three months' imprisonment, without hard labor." The extenuating circumstance in the case, which produced this trifling sentence, was, that the professor did not know arsenic was so poisonous.

PROCEEDINGS OF SOCIETIES.

PHILADELPHIA COUNTY MEDICAL SOCIETY.

A CONVERSATIONAL meeting was held December 24, 1873, at 8 o'clock P.M.

Dr. EDWARD WALLACE was called to the chair.

Dr. M. O'HARA read the report of a case of successful tracheotomy. (See current number of the *Times*.)

Dr. J. S. COHEN stated that he had seen the case of Dr. O'Hara several times since the operation, and was in some doubt as to whether it were not a case of acute laryngitis of children, with submucous organizable effusion, resting this opinion on the absence of any evidence of membrane, the tenderness externally, the immediate recuperation after the operation, the impossibility of respiration without the tube for so long a time, and the swollen condition of the upper portion of the larynx which had prevented laryngoscopic inspection of the interior. He had no doubt as to the propriety of the operation, and believed that cases of simple inflammatory laryngitis were not relieved from suffocation by tracheotomy, because they were mistaken for croup, which many think impossible to overcome by the operation. Persons who have been unfortunate in their first few tracheotomies for croup were too apt to abandon the operation, yet several prominent tracheotomists had lost numbers of cases before they had succeeded in saving one, but still they persisted; and, as the result of several hundred operations, their success had reached the average proportion. He had referred to the retention of the tube. In some undoubted cases of croup there had been, for various reasons, an impossibility to breathe without the tube, though in most instances it could be removed from the fifth to the ninth day, and, exceptionally, much earlier.

The operation should be performed early, before the blood was poisoned by the retained carbonic acid; but cases had been saved at the last extremity. Continuous and increasing dyspnoea with sub-thoracic inspiratory sinking-in, would, he believed, indicate the time for operation, provided these symptoms had existed two or three hours, or even only an hour, and remained insusceptible to the ordinary modes of relief. When the propriety of the operation suggested itself for the first time, there was little time to lose; too long a delay might compromise the result. He believed a great deal of success depended on the after-treatment. The patient, his disease, and for the first day or two his tube, particularly, needed attention. He believed that the surgeon, or a competent and responsible medical representative, should stay by the patient the first night after the operation; and, in some cases, the second night also. Cases are sometimes lost by allowing the tube to become stopped up, and the patient dies in the very condition for the relief of which the operation was instituted. He was not prepared to assert that these patients would have lived if the after-attention had been everything that could be desired; but he did believe that they did not obtain a fair chance for their lives. With regard to the statistics on the subject, it was hard to get much satisfaction from them, except that cases were saved; and Dr. Cohen said that he was of the opinion of those who were satisfied with this fact, without inquiring as to the proportionate number saved. The published statistics of the Parisian hospitals, and of many private operators who had reported their unsuccessful as well as their successful cases,—now amounting to thousands,—show a proportionate saving of one in from three to four cases. Individual records must be taken at their individual worth. He believed with Trousseau that, with proper care and attention, at least one-half of the cases suitable for operation ought to be saved in private practice.

Dr. H. LENOX HODGE said that he was much interested in the subject which Dr. O'Hara had brought before the Society in his carefully-prepared paper full of pointed thought in regard to his case and the operation.

Dr. O'HARA asked the question whether an anæsthetic should be used.

Dr. HODGE remarked that while he employs anæsthetics in almost every other operation in surgery, he does not use them in tracheotomy. When the trachea is first opened, there is, for a few moments, almost a cessation of respiration; and not unfrequently artificial respiration has to be resorted to. For this reason the child should be in the best possible condition to respond to the surgeon's efforts, and not unconscious from an anæsthetic. The child does not suffer much pain, as the impeded respiration has long since lessened his sensibilities. Dr. Hodge recommends that a portion of two or three rings of the trachea be excised, as has been done in this city for a number of years by Professor Pancoast. In addition to this, Dr. H. employs the tracheal tube for a few days. When such a section of the trachea has been made, the tube is easily inserted without a director, may be removed without any danger of impairing respiration, and can easily be replaced. Dr. H. referred to one case of membranous croup, in which the child would have died if it had not been for this section. In a paroxysm of cough and apnoea, with the tube in place, death was imminent; the tube was withdrawn, and a mass of membranes discharged through the section which could scarcely be forced afterwards through the tube. Some have objected to the section of a segment of the trachea, that in after-years the scar, by contracting, would interfere with the respiration and the voice. Experience has shown that this does not result in the least degree. By the operation many lives may be saved which otherwise would

be lost; and even when life is not saved, relief is given to the terrible dyspnoea.

Dr. HODGE reported four cases of tracheotomy on account of membranous croup; and of these four, three lives were saved. He would recommend that the trachea be opened just beneath the isthmus of the thyroid gland, as high as possible without injury to the gland blood-vessels; that a segment of the trachea be excised, and that the patient be kept for a long time in a moist atmosphere at a temperature of 80° Fahr.

Dr. P. D. KEYSER asked what kind of canula the gentleman used. He had seen a flexible tube used in Berlin and Paris which did not produce friction and irritation in the trachea. Cases have died after the operation, from tracheitis, produced by the use of an inflexible instrument.

Dr. HODGE, in reply to Dr. Keyser, said that cases had been reported in which the tracheal tube had produced ulceration even into the innominate artery. One advantage of the operation as above recommended was, that the tube could soon be dispensed with.

REVIEWS AND BOOK NOTICES.

THE PUERPERAL DISEASES. Clinical Lectures delivered at Bellevue Hospital. By FORDYCE BARKER, M.D. New York, D. Appleton & Co., 1874.

We confess to a weakness for a good clinical lecture, whether delivered to the listeners of the amphitheatre or through the press to the listening world. Since we read, with a rapture that time has somewhat toned, the "Lectures on the Renewal of Life," no book of the kind has pleased us more than "The Puerperal Diseases." The happy union of the clinical and didactic, the extreme fitness of the well-selected cases to the remarks, and of the remarks to the cases, the excellent note-taking in the cases, and the author's clear statement of his own opinions,—a clearness not at all dogmatic,—give a life and reality to the work which impress us with confidence in its truth.

The scope of the work is not too wide, not too limited; everything is not crowded upon us in clinical form, like a polypharmic pill which hopes to pass unnoticed by its silver coating. The diseases treated are all well bound together by a strong natural union,—the puerperal state; all bring us in their study to the bedside of the newly-delivered woman,—nowhere else. They can, from their limited number, be remembered as a whole in their various relations and connections. The book has a being and an entity: like a poem, it evidently grew, was not made.

The author claims that this is the only work of the kind in the English language: it is the digest of nearly twenty years of clinical teaching in Bellevue Hospital, made up from phonographic reports, condensed and brought up to the standard of the times.

Lecture I. treats of puerperal convalescence, and contains many practical suggestions. The author, however, recommends placing the patient upon the hands and knees where the bladder cannot be emptied in the recumbent position after labor, which we hardly think entirely sound advice. To say nothing of the danger from hemorrhage, the risk of the entrance of air into the vagina and uterus has been lately pointed out as being much greater in this position than in any other. Generally, we think, the secret lies in an early attempt, and in never allowing the patient to entertain the idea of there being any difficulty in the recumbent position, and enjoining upon the nurse to make moderate pressure over the pubis during the

effort. Should this fail, we think the catheter preferable to the posture mentioned above.

In retention from over-distention, the author uses ergot in fifteen-drop doses, often repeated; but many of these cases have already taken ergot in much larger doses shortly before, and in fact it has been claimed that ergot favors retention.

On page 8 the author speaks—in treating of after-pains—of “certain rare cases purely neuralgic,” where the uterus is small, firm, but exquisitely sensitive to pressure; cases which do not yield to opiates, but are successfully treated by full doses of quinia and chloroform liniment applied externally. This suggestion we consider of great value. He also employs vaginal injections of dilute carbohc acid in all his private puerperal patients for the first few days: why not also in his hospital practice we fail to understand, where, if ever, their use seems specially indicated.

Where purulent leucorrhœa succeeds the cessation of the lochia we are advised to make immediate examination with the speculum, the author expecting in such cases to discover erosion of the cervix, and by treatment greatly to hasten convalescence.

For delayed involution he recommends ergot, nux vomica, and tinct. ferri chl., using the tincture of nux vomica in the somewhat large dose of fifteen minims or about thirty drops, which seems to us liable to affect the nursing infant when repeated several times a day.

On page 18, treating of secondary hemorrhage, after injecting dilute persulphate of iron, of the use of which he is a strong advocate, he says, “If your patient shows no signs of shock from loss of blood, give thirty drops of Squibb’s fluid extract of ergot with twenty drops of the tincture of nux vomica;” and a little farther on, “If the patient exhibit shock from loss of blood, do not give ergot till the reaction is established.” In these sentences the author gives either very valuable or very dangerous advice, and the question hinges upon the fact whether we have any proof that ergot increases shock, for we have proof that it is very efficient in preventing hemorrhage, and unless there be certainly danger from its administration under the circumstances its delay is dangerous. The question in our present state of knowledge is a difficult one. If ergot, as many believe, causes contraction of the vessels of the spinal cord, and if the resulting anæmia of the cord tends to deepen or prolong the condition known as shock, then its administration may do more harm than the good to be expected from its action on the uterine fibres.

While he warns against leaving fragments of placenta and membranes in the uterus, we do not see that the author has anywhere laid stress upon the necessity of a careful examination of the removed secundines, which so often would tell their own story.

Where portions of placenta have been unavoidably retained, and hemorrhage results, the advice given is, if the os be firm and contracted, to tampon the cervix with sponge-tent, and apply a pad and binder firmly over the uterus, though it is admitted that patients have died of accumulation of blood in its cavity “two, three, and four weeks after parturition.” After dilatation by the tent, in six or eight hours he attempts removal of the offending body, and, if successful, injects the cavity with persulphate in dilute solution. Where the os is flaccid, the injection alone is recommended, and in either case he administers a rectal enema of an ounce of turpentine with half an ounce of olive oil. In this connection ergot is not noticed, though we cannot but think its administration would be as useful as the pad and binder.

Lecture II. is upon the diet of puerperal women. The author is an enemy of restricted diet. No parturient Oliver would need to ask him for more. He administers beef-tea early, and full diet as soon as appetite

demand it. He finds nurses unwilling at first, but growing rapidly enthusiastic; which we take it is one of the main dangers of the liberal system, and confess we are still in favor of moderate restriction for the first few days.

On page 29 we find some valuable hints about the use of purgatives. The tendency of castor oil to bring down and aggravate hemorrhoids is noticed. Where these exist, the author recommends either an aloetic pill or a liquid preparation of senna, jalap, and nux vomica. For the cure of painful piles the author relies upon small doses of aloes, combating the idea that they aggravate this condition in puerperal women. Forcible dilatation of the sphincter ani—after the method of Van Buren—he considers the best procedure where they are developed during labor, selecting the moment after the birth of the child and before removal of the placenta.

Lecture III. treats of laceration of the perineum. In regard to support of this structure, the view of the author (p. 46) is, “that he is confident that a majority of lacerations under his own notice have occurred from the patients suddenly withdrawing themselves from the supporting hand,” evidently favoring support; while, however, he subsequently states that the term “support” is an unfortunate one, and closes the chapter by quoting largely from the paper of Dr. William Goodell on this subject.

Lecture IV. treats of thrombus of the vulva and vagina; Lecture V. of puerperal albuminuria. This chapter and the two following on puerperal convulsions are illustrated by remarkably striking and pertinent cases. The author’s experience has been extended, and his opinions are decided. He considers that the albuminuria discovered after convulsions have occurred is more often the effect than the cause of the convulsions, yet does not deny the danger of pre-existing albuminuria, as on page 114, when speaking of its treatment, he says, “I can truly affirm that I now rarely encounter puerperal convulsions when the previous detection of albuminuria has led me to be particularly apprehensive of their occurrence. Indeed, I will go further, and say that in most cases where any of the predisposing causes that I have mentioned are discovered sufficiently early, they may be successfully treated, and convulsions will occur only in a small percentage.”

The view of the author seems to be that both convulsions and pre-existing albuminuria are manifestations of some existing morbid cause, probably (page 110) “the highly congested state of the venous system.” On page 112 he gives the following as the predisposing causes of convulsions: “albuminuria, hydræmia, anæmia, uræmia, and primiparity,” and adds “hereditary and atmospheric influence.”

In the treatment of convulsions occurring before labor, bleeding is recommended if the pulse be full and hard, and evidences of cerebral congestion apparent: he then gives a brisk purgative, preferring elaterium if the patient be comatose, calomel and jalap if not. He avoids stimulating enemata, and endeavors to arrest the convulsions by inhalations of chloroform, suspending it during the attacks, unless the intervals be very short; and, to prevent a return, the hypodermic injection of morphia in full doses. The alleged danger of fatal narcotism from renal lesions he considers more imaginary than real. He considers it—the morphia—the most efficient means yet known for allaying that irritation of the spinal system which culminates in convulsions, and that uræmia does not contra-indicate the use of this agent.”

Chloral hydrate he has not found serviceable. Where “delivery irritates less than delay,” he delivers. After labor, the question of bleeding resolves itself somewhat into how much blood has already been lost: if less

than usual, the author advises bleeding, elaterium, and diuretics. If the patient be anæmic and exhausted, he would use morphia, but no chloroform.

Lecture VIII., on Lactation, we recommend to the reader for its excellent treatment of the management of sore nipples. Recognizing that there are sore nipples, the author endeavors rationally to discriminate in their treatment. One sentence we light on, p. 137, which is worth more than many books: "If the ulcerative process have commenced, stop nursing from that nipple." How much suffering and consequent destruction of health would be avoided were this plain precept always put in practice! The author advises, as a lotion preventive of erosion and excoriation, a ten-grain solution of the nitrate of lead. It has been vaunted as a remedy rather than a preventive, and as a remedy we have met with but indifferent success with it. We would remark that where the solution has failed, cure has followed the use of the powdered nitrate dusted upon the excoriated surface.

The chapter on Mastitis and Mammary Abscess aims also at a clear discrimination of the varieties of the complaint. The author does not consider *belladonna*, however early and freely used, as capable of arresting the formation of pus. He seems a little doubtful even of its power in arresting the secretion of milk.

Puerperal Mania, Relaxation of Pelvic Symphysis, and Phlegmasia Dolens, are the subjects of the three succeeding chapters. The remainder of the book is taken up principally with that group of diseases sometimes included under the general head of puerperal fever, which the author, however, considers a distinct zymotic disease.

On p. 476 he sums up his opinions in a distinct "confession of faith," the points of which briefly are, that it is a fever peculiar to puerperal women,—its symptoms not the consequence of local lesion; it is of the class known as zymotic; we are ignorant of its specific cause, which "may be either epidemic influence, contagion, infection, or probably nosocomial malaria;" that death may occur without any local lesion sufficient to account for it, and that while erysipelas, scarlatina, etc., may develop puerperal erysipelas, puerperal scarlatina, etc., they cannot cause true puerperal fever. In accordance with such views, we find puerperal peritonitis, pyæmia, and septicæmia treated of as distinct affections. Space and time fail to allow us a detailed account of these valuable chapters. The author's argument, to some not convincing, must to all seem able and candid; while the views of others are stated with fairness. He advises strongly the employment of veratrum viride in puerperal fever and peritonitis; and the employment of full doses of quinia in these groups of diseases.

Much has been said of the practical element in the American character, and, while in its medical literature this has been too often another name for shiftlessness and mechanical performances, we are glad to point to the present work as one eminently and truly practical. Clinical lectures most often fail when we attempt to apply their teachings to actual practice. The lines of demarcation, so sharply drawn in the lecture or the book, vanish at the bedside; disease complicates disease, till the student longs in vain to meet one of those typical cases that he knows all about, but which seem to flourish only on paper or in the hospital atmosphere. Few books of the kind will stand this test, but, if we mistake not, this is one of the few.

E. W. W.

A CLINICAL HISTORY OF THE MEDICAL AND SURGICAL DISEASES OF WOMEN. By ROBERT BARNES, M.D. Lond. Philadelphia, H. C. Lea.

The author of "Obstetric Operations" has already

made himself the friend of many a *distract* brother in the profession, and the rare charm of that work is not wanting in the present volume. He aims, not at a mere compilation of the works of others, but to draw largely from his own experience and "to bring into the circle of gynæcological literature new illustrations:" of his success in this endeavor the reader must judge for himself.

The volume before us—the American edition, published by Henry C. Lea—contains nearly eight hundred pages, with one hundred and sixty-nine engravings on wood, very many of them original with the present work. The chapters are full, thorough, and well written; the evident aim throughout the book being the sometimes forgotten one—to teach how to cure or palliate disease. There is no show of erudition, no overwhelming citation of authorities to display the extent of the author's reading, but he leaves it for the reader to judge whether he be familiar with them or not.

The violent rider of no hobbies, its author is a man of decided and original views, which the critic may at times dissent from, but can by no means despise.

An extended review of this book is not our intention, but we may say that a careful perusal has discovered to us but slight grounds for fault-finding; and while comparisons are odious, the reader will not be disappointed even though he take up the book with a very exalted idea of its merits.

GLEANINGS FROM OUR EXCHANGES.

ICHTHYOSIS LINGUÆ (*The Lancet*, March 14, 1874).—At a meeting of the Royal Medical and Chirurgical Society Mr. W. Fairlie Clark read a paper on this disease. According to him, it manifests itself in an overgrowth of the papillary and epithelial elements of the mucous membrane, and it is the dorsum of the tongue which is affected in the majority of instances. In some cases the enlarged papillæ may be seen sprouting up in small groups, in others the whole of the affected surface is smooth, hard, and almost cartilaginous. It presents either a silvery or a snow-white appearance, quite different from any fur which ordinarily covers the tongue. When the disease has once manifested itself, it is very persistent. Though it sometimes responds a little to treatment, and though it varies slightly, it never wholly leaves a spot which it has once attacked.

It may be distinguished both pathologically and clinically from warts, corns, and papillary tumors of the gum, in two ways. 1. It attacks only the tongue and the inside of the mouth; no other mucous membrane is subject to such an affection. 2. It slowly spreads, but gives only slight inconvenience and no pain. In this state it may remain many years, but sooner or later it assumes the characters of epithelial cancer. Its essential nature appears to be that of a chronic inflammation, accompanied by an overgrowth of the papillæ and a loss of power to throw off the effete epithelium. It is much more common in men than in women, and never occurs before puberty. A venereal ulceration may be its starting-point, but there is no reason to think that it is always associated with syphilis. If the disease presents itself in a very early stage, it should be promptly and thoroughly excised. On the other hand, when it has become epitheliomatous, no time should be lost in performing an operation. But during the whole middle period the best thing that can be done for the patient is to study his general health. If any local measures are used, they should be of an unirritating kind. If any jagged teeth are present, they should be removed. At the same time, the patient should be advised to guard his tongue against all

sources of irritation, and to pay particular attention to his digestion. Under this treatment the ichthyotic coating often alters for the better, though it is never altogether removed.

ACUTE PERIOSTITIS OF THE OCCIPUT AND UPPER CERVICAL VERTEBRÆ (*Boston Medical and Surgical Journal*, March 19, 1874).—George Atwood, M.D., reports the case of a stout, healthy man, æt. 50, in whom an erysipelatous inflammation of the face and neck was followed in about a month by severe pain which seemed at first to be neuralgic, but soon developed alarming characters. There were frequently-recurring spasms of the neck; the muscles were rigid; the jaw was tightly closed; the patient could only take liquids, and these, on being swallowed, excited spasms; he could not lie down in bed, for immediately on making the attempt spasmodic action would follow, so as to render the act impossible. On moving the head, pain would commence in the neck, and extend upward over the back of the head, and downward to the shoulders, but never any farther. The pulse was 95, and at times intermitting. During the next four weeks he did not lie in bed, but slept in a chair when he was not walking the room.

He was placed on iodide of potassium, bromides, cod-liver oil, strychnia,—with tincture of iodine, blisters, and counter-irritation to the neck,—and obtained some relief, which was, however, only temporary. A month or two later, he had a paralytic attack, and three months from the commencement of his troubles he expired suddenly.

On dissection, the condyles of the occiput, both articulating surfaces of the atlas, the axis, and the odontoid process were denuded and eroded, the latter feeling smooth and like a piece of ivory. No induration of the tissues, and no effusion of pus or lymph, was apparent; but the periosteum and ligaments around the spine, and on the base of the occiput, to the extent of an inch from the foramen magnum, could be easily torn; the softening being more marked on the left side than upon the right, although the tissues generally were of a dull red color and softened. The transverse ligament connected with the odontoid process was destroyed, and mobility of the head was quite free.

LARGE DOSES OF BROMIDE OF POTASSIUM IN EPILEPSY (*The Lancet*, March 14, 1874).—Dr. Otley reports a case of severe epileptic convulsions occurring in a man aged 21. For two days he was never three hours at a time without a paroxysm, and they increased in frequency and violence until he had five in twenty-five minutes. Respiration was accelerated, and the patient was comatose and almost hemiplegic. He was then ordered twenty grains of bromide of potassium every hour. In half an hour the fits were less frequent, an interval of four hours then occurred without any convulsion, and nine hours after the administration of the first dose he had his final paroxysm. He continued to improve in every particular. On the following day the bromide was decreased to twenty grains every four hours, and then gradually lowered to twenty grains three times a day, which dose he was ordered to continue for a twelve-month.

BROMIDE OF POTASSIUM IN EPILEPSY (*The Dublin Journal of Medical Science*, February, 1874).—At a meeting of the Medical Society of the College of Physicians, Mr. Thomas Hayden read a paper on the use of bromide of potassium in epilepsy, and gave three cases, in all of which a marked amelioration in the condition of the patients had resulted, though it could not be asserted that they were completely cured. He found the full benefit of the salt could be obtained by giving thirty grains thrice daily, and the only symptoms of

bromism caused by this dose were vertigo, indistinct articulation, and an unsteady, tottering gait. He believes the efficacy of the drug to be limited to a reduction in the number of the fits and a mitigation in their severity, while at the same time the nutrition of the nerve-centres is promoted, as judged by the improvement of memory and of self-confidence, and the cessation of muscular tremor on the part of the patient. He could not agree with Dr. Darby, who had tried bromide of ammonium with young females, and had obtained more favorable results than from the use of the potassium salt. He thought, on the contrary, that it was precisely and especially in cases of epilepsy associated with uterine derangements that the bromide of potassium was efficacious and the bromide of ammonium not so. Dr. Fitzpatrick had found the most benefit from its use in the minor form of the disease, in those cases which merely occurred during sleep, or which were dependent on uterine irregularities in the female, or on seminal irritation in the male.

A RAPID CURE FOR TAPE-WORM.—A. J. Schafish, of Washington, says, *inter alia*: I made no preliminary provisions further than to forbid the patient from taking any breakfast the day I intended removing the worm, and giving him a large dose of Rochelle salts the preceding night. At ten o'clock in the morning he had the following at one dose:

R Bark of pomegranate root, $\frac{1}{2}$ ounce;
Pumpkin-seed, $\frac{1}{2}$ drachm;
Ethereal extract of male fern, 1 drachm;
Powdered ergot, $\frac{1}{2}$ drachm;
Powdered gum arabic, 2 drachms;
Croton oil, 2 drops.

The pomegranate-bark and pumpkin-seed were thoroughly bruised, and, with the ergot, boiled in eight ounces of water for fifteen minutes, then strained through a coarse cloth. The croton oil was first well rubbed up with the acacia and extract of male fern, and then formed into an emulsion with the decoction. In each case the worm was expelled alive and entire within two hours. No unpleasant effects followed.

One curious fact that I have noticed is that in each case the worm was passed with the head firmly fastened to the side of its body at about the widest part, from which it was with difficulty removed; also that the worm was twisted and doubled into various knots. In one specimen, only fourteen feet long, I have counted and untied no less than forty-seven of such knots. I have no doubt that, to escape the effects of the medicine, in his distress, he fastens himself to his own body, in this way loosing his hold of the intestines, and is driven forward with the other contents of the bowels.—*The Druggist's Circular*.

REST AS A THERAPEUTIC AGENT (*The Dublin Journal of Medical Science*, February, 1874).—Dr. J. Magee Finney, under the above title, has written an interesting paper detailing a number of cases occurring in his practice, some of which illustrate the importance of physical and physiological rest as a curative means. He alludes to the hygienic and therapeutic importance of the law that, in the recovery from any illness, long or short, exercise, to be beneficial, must be accurately proportioned to the strength of the individual, and must never be carried to the extent of actual fatigue or temporary exhaustion. In cardiac diseases rest is particularly important, and in dilatation, pericardial inflammation, and stenosis or patency of the mitral orifice it is imperatively demanded. In the treatment of internal aneurism, rest affords the best possible means of placing the patient on the way to nature's cure.

FRACTURE OF THE CLAVICLE TREATED BY PLACING THE ARM BEHIND THE BACK (*Edinburgh Medical*

Journal, February, 1874).—M. Broca recently healed a case of fracture of the left clavicle, in which the fracture was near the middle of the bone, and was oblique from above downwards and from without inwards, the fragments riding one another considerably. After numerous plans of treatment had failed to reduce the fragments, he placed the arm in a semi-flexed position behind the back, where it was retained by a bandage for eighteen days, with the effect of completely adjusting the fractured surface, and producing an excellent cure. For a few days longer a sling was used. The patient, a man of considerable nerve, complained of the pain and inconvenience of the method only the first twenty-four hours.

BILLROTH'S OPERATION FOR REMOVAL OF THE WHOLE LARYNX.—The patient was exhibited to the Imperial Medical Society of Vienna. The operation had been performed some time previously, and, thanks to a very ingenious apparatus, the man was enabled to speak and swallow. Many contrivances were tried before the successful one, which consisted principally of two curved canulæ, to which were added a trachea-tube and a voice-canula. The apparatus for phonation was supplied with a peculiar kind of tongue made of very thin silver. The patient was desired to read aloud before the members of the Society, and, though he spoke pretty distinctly, great attention was required to follow him. The poor man looked very thin and anæmic, and it was feared that carcinoma would ere long break out in other parts of his frame. Billroth's operation remains, nevertheless, a great surgical feat.—*London Lancet*.

MISCELLANY.

At a meeting of the board of trustees, April 7, Dr. Wm. H. Pancoast was elected to the position of Professor of Anatomy in the Jefferson Medical College, on the fifteenth ballot.

NEW YORK HOSPITAL.—The Governors of the New York Hospital have purchased the "Thorne" mansion in West Sixteenth Street. The house is about 66 by 80 feet, and three stories in height. In the rear of this the Special Committee recommend the erection of a reception-hospital for acute surgical and medical cases, with a capacity of from 50 to 90 beds. They estimate the cost of the hospital building at \$170,000, of its furniture at \$20,000, and of the engine-house, laundry, and vaults at \$30,000. The probable yearly expenses of the reception-hospital were estimated at about \$40,000. The recommendations of the committee were unanimously adopted by the Board of Governors, and the Thorne property was secured for \$20,000. The first floor of the house will be used for offices; the second for the library and pathological cabinet; the third floor for the hospital staff, and probably some private wards. Possession will probably be obtained about April 1. Additional ground in the vicinity will probably be obtained.—*Tribune*, March 18.

A BIT OF EXPERT-TESTIMONY.—When Orfila, the celebrated French chemist, was on one occasion a witness at a trial for poisoning, he was asked by the president if he could state the quantity of arsenic

requisite to kill a fly. "Certainly, M. le Président," replied the expert; "but I must know beforehand the age of the fly, its sex, its temperament, its condition and habits of body, whether married or single, widow or maiden, widower or bachelor."—*Boston Journal of Chemistry*.

HONORS TO TRAUBE.—On January 25, Prof. Traube ended his twenty-fifth year of service at the Berlin Charité. In consideration of the character of this service, the directors of the hospital gave a celebration dinner, at which most of the professors of the University, and many other physicians, were honored guests.—*Wiener Med. Presse*, February 15, 1874.—*Clinic*.

The English pharmaceutical chemist, Thomas N. R. Morson, died on the 3d of March last, from paralysis, in the seventy-fifth year of his age. He was the first man who manufactured the sulphates of quinia and of morphia in England.

A YORKSHIRE PRESCRIPTION.—

"Too pennorth Oil of Vermins
Wan pennorth Seraph of Eyelets
Wan pennorth Seraph of Squeels."

NOTES AND QUERIES.

DR. HASSALL has recently analyzed nineteen samples of sherry wine,—eight of them of the highest quality procurable in the London market. Not one of them could be considered as a pure and natural product of the grape; all of them had been heavily fortified by the addition of spirit, and seventeen of them contained a notable amount of the sulphate of calcium.

At a stated meeting of the College of Physicians of Philadelphia, held April 1, 1874, Prof. Gross announced the death of Prof. Henry Miller, of Louisville, Ky., and offered the following preamble and resolutions, which were adopted:

"Whereas, The College of Physicians of Philadelphia has heard with profound regret of the death of Prof. Henry Miller, M.D., of Louisville, Kentucky, an Associate of this College; and whereas, it is meet and proper, when a great and a good man dies, that his surviving friends should record their opinion and feelings of his worth; therefore, be it

"Resolved, That in the death of Dr. Henry Miller, for nearly a third of a century Professor of Midwifery, first in the University of Louisville, and afterwards in the Louisville Medical College, medical science has lost one of its most zealous votaries, obstetric medicine one of its most instructive and lucid expounders, and American authorship one of its most able and distinguished writers.

"Resolved, That a minute of these proceedings be recorded upon the books of this College, as a mark of our appreciation of the worth of our deceased associate; that a notice of them be published in the medical journals of this city, and also that the Secretary be instructed to send a copy of them to the family of the late Professor Miller, with the assurance of our heartfelt sympathy in their bereavement."

JOHN H. PACKARD,
Secretary.

OFFICIAL LIST

OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U.S. ARMY, FROM MARCH 31, 1874, TO APRIL 6, 1874, INCLUSIVE.

PETERS, D. C., SURGEON.—Granted leave of absence for sixty days, on Surgeon's Certificate of Disability, with permission to leave limits of the Division. S. O. 8, Division of the South, March 31, 1874.

HALL, J. D., ASSISTANT-SURGEON.—Granted leave of absence for thirty days, to take effect when a relieving officer shall have reported at Fort Benton. S. O. 56, c. s., Department of Dakota.

SATURDAY, APRIL 18, 1874.

ORIGINAL LECTURES.

REPORT OF TWO CLINICAL LECTURES ON THE RELATION OF RENAL DISEASE AND HEART-DISEASE.

BY JAMES TYSON, M.D.,

One of the Visiting Physicians and Pathologist to the Philadelphia Hospital.

Reported by LOUIS STARR, M.D.

I.—HEART-DISEASE TO KIDNEY-DISEASE.

GENTLEMEN,—I desire to invite your attention, in the course of perhaps two lectures, to the consideration of combined heart- and kidney-disease, a subject which has excited much discussion, and in regard to which, until comparatively recently, no very definite conclusion has been attained. At first it was supposed that the primary lesion in this combined affection was always seated in the heart, but on further investigation certain cases were observed in which disease of the kidneys unquestionably preceded heart-disease. Hence, in the reaction which followed, the kidneys were for some time held to be the invariable starting-point. At present, however, it is generally acknowledged that while most frequently disease of the kidney occasions alterations in the heart, there are undoubtedly many cases in which this order of sequence is reversed.

In illustration of the latter more rare form of this relation, I will read to you the histories, from notes taken by the resident physician Dr. Bruen, of two patients in whom it existed.

Case I.—Mary K., 39 years of age, married, was admitted to the Philadelphia Hospital on November 15, 1873. Both of her parents suffered from rheumatism and subsequent cardiac disease, and her mother died with dropsy, which came on after confinement. The patient herself had several attacks of rheumatism, but in other respects enjoyed fair health until about five months before admission, when she began to notice shortness of breath on exertion, together with œdema of the legs and ascites. At that time she was five months advanced in pregnancy. These symptoms grew slowly worse up to the time of her confinement, after which they continued to increase even more rapidly. Her labor was quite normal, and took place five weeks before her admission to the hospital. At admission her abdomen was enormously distended, the lower three-fourths were absolutely flat on percussion, and a marked sense of fluctuation was communicated to the fingers on palpation; the lower portion of the abdomen rested upon the thighs, and the friction of the opposed surfaces had caused extensive excoriation. The legs, from the feet upwards, were œdematous, and there was also some œdema of the hands and arms. The dyspnoea was so great as to render it almost impossible for her to lie down in bed; the respirations in the upright position numbered sixty per minute.

There was no evidence of any disease of the lungs or pleura. The area of cardiac dulness was increased, and a double mitral murmur, with an aortic systolic murmur, could be distinctly heard. The pulse was

feeble and frequent, beating one hundred and fifteen times a minute. The urine was found to be diminished in quantity, high-colored and acid in reaction, and to contain a large quantity of albumen, the precipitate by acid and heat being equal to at least three-fourths of the bulk of the fluid tested. The microscope revealed numerous *hyaline* and *fatty* casts. Her general health was much reduced, desire for food was almost absent, and her bowels were constipated.

She was ordered half an ounce of Basham's mixture* three times daily, twenty drops of tincture of digitalis, repeated according to its action on the pulse, small doses of elaterium to relieve the constipation, and a nutritious diet, with a small quantity of whisky (f3ij in twenty-four hours). Under this treatment the abdomen became somewhat less tense, a larger quantity of urine was passed, and the number of respiratory movements fell to thirty per minute, but the pulse remained frequent, and seemed to be unaffected by the digitalis, although its administration was pushed to the limit of safety.

This improvement was but temporary, and on November 20 it was decided to perform paracentesis. Six pints of a highly albuminous fluid were allowed to flow from the abdomen, when the canula was withdrawn and the aperture allowed to remain open. Two hours after the operation, the pulse, which had been beating one hundred and twenty per minute, fell to fifty, then to forty-six, and became dicrotic. The dicrotism was evidently cardiac in its origin, being produced by a second effort at systole on the part of the left ventricle. The patient was, however, in every respect better; indeed, felt quite comfortable. The effect on the heart and general condition was attributed to the digitalis, which was now, however, suspended.

November 24, the pulse was seventy-two, somewhat irregular, though entirely free from dicrotism; the respiratory movements were reduced to twenty-six, and were much more free, while the œdema was greatly diminished. She passed, on an average, three pints of urine each day. At this date the latter was found to contain an unusual number of mucous corpuscles, some spherical epithelium from the bladder, and a few *hyaline casts*; the amount of albumen was reduced to one-sixth of the bulk of the urine tested. Since the operation a large quantity of fluid, estimated at six pints, had trickled from the orifice in the abdomen. Quinine was added to the treatment.

Notwithstanding the continued use of diuretics (bitartrate of potash and infusion of juniper, infusion of scoparius, and free doses of digitalis), the ascites slowly increased, and on December 12 she was again tapped by Dr. Bruen, the resident physician, and one hundred and thirty ounces of fluid were removed. This was again followed by amendment, the œdema continuing to diminish. By December 22 the opening of paracentesis was closed, the *urine was free from albumen, and no casts were found after prolonged and careful examination.*

On December 24, after exposure to cold, she became much worse, and by December 25 the legs were again swollen almost to bursting, and had assumed an erysipelatos hue. The respirations were hurried, the skin was hot and dry, and the urine was so charged with albumen that it became almost solid on the application of heat and nitric acid. Paracentesis was performed for the third time, fifty ounces of fluid being removed. No relief was experienced from this operation: in fact, the dyspnoea steadily increased, and the pulse became

* R. Liq. Ammon. Acetatis, f3ij;
Tr. Ferri Chlor.,
Ac. Acet. dest., aa f3ij;
Curaçoe vel Syrupi q. s. ad fac. f3vi. M.

so feeble that it could scarcely be counted at the wrist.

At 3 P.M. on December 27 the pulse at the wrist was extinct and no cardiac impulse could be felt, but on auscultation the heart was found to be beating one hundred and thirty-nine times a minute. Upon extending the examination to the other parts of the chest, the physical signs of pleuritic effusion were detected on the right side. At 6 P.M., as a last resort, this side of the chest was tapped, and twenty-eight ounces of liquid removed; immediately afterwards the patient felt easier, but soon began to sink, and died at 9.30 P.M.

The general plan of treatment remained the same as that already mentioned throughout the course of the illness, although, as the indications varied from time to time, the quantity of digitalis used, as well as the form of its administration, was changed: as stated, other diuretic preparations, such as acetate of potash, juniper, sweet spirit of nitre, etc., were also tried.

At the *autopsy*, which was made twenty-four hours after death, a quantity of fluid, eighteen ounces by measurement, was found in the right pleural cavity, and the upper part of the parietal and visceral portions of the pleura was covered by a moderately thick layer of fresh lymph. The right lung was congested and somewhat compressed, but not at all inflamed. There was nothing abnormal in the left lung or pleura. The heart weighed fifteen and a half ounces. The left ventricle was dilated and hypertrophied. The leaflets of the aortic valve were thickened; this alteration was most marked along the edges of the leaflets and in the corpora aurantii; the latter were increased in size, being about as large as a split pea. Both leaflets of the mitral valve were thickened, and they were fused along their edges so as to form a funnel-shaped projection into the cavity of the left ventricle, with only a slit-like opening through which the end of the thumb could scarcely be passed; the valve thus coalesced was the seat of calcareous deposit. The right ventricle was also moderately dilated and hypertrophied; the pulmonary and tricuspid valves were healthy.

The liver weighed ninety-seven ounces, and was very fatty. The kidneys were lobulated, and weighed, together, fourteen ounces: they were, therefore, somewhat enlarged, and also congested; but in other respects they appeared normal to the naked eye. On microscopical examination, the renal tubules were in part lined with healthy epithelium, or with epithelium which was only slightly granular; in other portions, however, the epithelium was highly fatty. There was also slight increase in the interstitial fibrillar tissue. No trace of amyloid degeneration could be detected by the iodine test.

Case II.—William —, 51 years of age, was admitted to the medical wards of the Philadelphia Hospital on November 1, 1873. He had for a long time been an attendant about the hospital, and was very intemperate. At the time of admission he was suffering from dyspnoea, oedema of the legs, and ascites; and on examining the heart a double aortic murmur was detected. His urine, which was bloody and highly albuminous, contained casts filled with broken-down epithelial cells, granular casts, and casts containing blood-corpuscles. He died in one week: previous to this event, however, the amount of albumen and blood in the urine had greatly diminished.

The post-mortem examination revealed great thickening and calcareous degeneration of the leaflets of the aortic valve, while the aorta itself was extensively atheromatous. The liver was cirrhotic. The kidneys were turgid with blood, and therefore a little heavier than in health: in other respects they were normal, with the exception of a slight increase in the interstitial fibrillar tissue.

When the lesions brought to light by the post-mortem examination are considered in connection with the symptoms observed during life and with the previous histories, there can be no doubt that in each of these cases cardiac disease was primary, and that the alterations in the kidneys were brought about by the disturbance of the circulation thus produced. When the mitral or aortic valves are diseased, especially when the valvular leaflets become rigid or contracted so as to allow of regurgitation, there is always a tendency for the blood to accumulate on the venous side of the heart. Under these circumstances the movement of blood through the kidneys is retarded, these organs become greatly congested, and, although it cannot be said that an inflammatory process is set up, the simple increment of pabulum in the augmented supply of blood must encourage the production of an increased amount of interstitial connective tissue. This may in time undergo contraction. At any rate, these kidneys are but little enlarged, or they may remain normal in size, or may even be smaller than natural. When enlargement is present it is not usually more than can be accounted for by the large amount of blood present by engorgement. If the kidneys be smaller, this condition interferes with the entrance of arterial blood, reacting upon and causing further alteration in the heart, which in its turn produces greater structural change in the kidneys. Thus the change of action and reaction continues until the patient is carried off by the combined disease.

When the alteration in the kidneys is far advanced, the epithelial cells lining the renal tubules, being deprived of their proper amount of healthful nutriment, undergo fatty degeneration. This change, however, is rarely met with in comparison to the condition of increased connective tissue and contraction.

Further, a kidney which is constantly engorged with blood is much more liable to attacks of acute inflammation than one which is in a normal state. This fact explains the frequency with which, in cases of this nature, the urine becomes suddenly bloody and highly albuminous and filled with epithelial casts and blood-casts, even after very slight exposure, such as would produce no effect in a healthy individual. In the intervals between such attacks the blood-casts disappear entirely from the urine, and the epithelial and granular casts also become much less numerous and often disappear, the granular continuing longest. When the kidneys are so far degenerated that fatty casts appear in the urine, it is extremely rare for them to be absent at any time throughout the course of the disease. The patient whose history I detailed to you first is the only one in whom I have ever known fatty casts to disappear entirely, except in the albuminuria of pregnancy, in which it is not uncommon for all casts to disappear after labor. Another interesting feature in the same case was the more ready absorption of the digitalis after paracentesis was performed, and the prompt appearance of this physiological effect. This is to be explained on the well-known principle that osmosis is facilitated by diminished pressure. I have also observed it when venesection has been

practised during the administration of the drug; quantities which had apparently no effect before the operation displaying promptly, and even in an alarming degree, their effect upon the heart.

ORIGINAL COMMUNICATIONS.

ON SOME CASES OF NEGLECTED IRITIS.

BY H. S. SCHELL, M.D.

INFLAMMATION of the iris is one of those disorders which has long been well understood, not only by ophthalmologists, but by the profession generally.

Such, at least, is the usual impression. But the fact is that the disease in question is very often overlooked or mismanaged, and in consequence many cases may be seen in which, though the acute stage has finally subsided, the eye is left permanently injured: its functions can no longer be properly performed.

In some instances of this kind, vision may be interfered with by bands of false membrane crossing over or even occluding the pupil.

Or, although the pupil is clear, attachments may remain between the iris and the lens capsule, keeping the former in a smouldering fever of restraint, ready to burst out at any moment into a vigorous attack of fresh inflammation.

And this time the mischief may be so thoroughly done that the choroid, retina, and vitreous, one or all, are involved; and the vision impaired beyond hope of recovery; or the healthy eye may finally set up sympathetic action, and to save it we may be forced to remove the one first attacked.

Especially in iritis must we oppose the very beginnings, if we hope to effect a perfect cure; and it therefore becomes a matter of much importance to know why these earliest stages are so often ignored.

In very many cases, it seems probable that the violent congestion or inflammation of the ocular conjunctiva, which so generally accompanies the disease, is responsible for its obscurity.

And it is quite natural that it should be so. A person with a sore eye applies for treatment. His eye is painful, watering profusely when any attempt is made to examine it. The spasmodically-contracted lids are forced apart just long enough to disclose a crimson conjunctiva and a clear cornea, and the first impulse is not to subject him to the pain of a further examination, but to prescribe some cooling lotion or astringent drops, and let him go in peace.

The following is a case in point:

M. C., female, aged 39, came to the Eye and Ear Dispensary of St. Mary's Hospital on the 5th of August, 1873. Her right eye had been very painful for two weeks. She had consulted one physician who had given her an astringent wash, and afterwards another who had advised the constant application of a cold infusion of slippery elm bark. But these medicines had only caused an aggravation of her symptoms. Upon examination, an intense congestion was found pervading the conjunctiva; but

through the network of interlacing vessels could be dimly seen a rosy zone of radiating vessels surrounding the cornea. There was a well-marked phlyctenula just beyond the outer margin of the cornea; also great intolerance of light, lachrymation, and dimness of vision. The iris was of a dull yellowish color, while that of the sound eye was a bright gray. Under the influence of alternate light and shade the contracted pupil moved very slightly and sluggishly.

She was ordered, for local use, a solution of the sulphate of atropia and to take colchicum and Dover's powder. When she returned to the dispensary on the 8th, the pupil was dilated, but irregularly, showing two points of adhesion to the lens. Mercurial inunction, and iodide of potassium, gr. x t. d., were prescribed, and on the 17th the pupil was widely and regularly dilated, the pain and photophobia gone, and the eye apparently well, except the remains of the phlyctenula, which was shortly cured by the local application of calomel. The atropia, however, was continued for the remainder of the month.

In the following case, also, the conjunctiva had occupied more than its share of attention:

C. S., a married woman, aged 32, presented herself for treatment August 5. Her left eye had been sore nearly a month. During that time her physician had prescribed for her various eye-drops; had blistered her on the temple and back of the ear. Upon inspection, the conjunctiva was found deeply injected, the episcleral zone barely discernible, the iris dull, and its color changed from blue to green. A well-marked, brownish nodule, the size of a hemp-seed, projected from the surface of its upper and outer segment, and opposite this point the episcleral zone of vessels was better marked than elsewhere. A few drops of an eight-grain solution of atropia placed in the eye caused in the course of half an hour some irregular dilatation of the iris, showing the existence of a synechia behind the nodule and at the lower edge of the pupil.

Upon close cross-examination, no further evidence of venereal taint could be obtained.

A solution of atropia for local use and mercurial inunction were ordered.

On the 15th the gums were found to be spongy; the nodule on the iris had disappeared; there was slight hypopyon in the anterior chamber, and the pupil was regularly and widely dilated. She was ordered to discontinue the inunction and to take pot. iod. gr. xv t. d., also liq. morph. sulph. f3i p. r. n., for the relief of nocturnal pain. On the 5th of September she considered herself quite well.

There is another class of cases, where the conjunctiva is not at fault, but the condition of the iris is disguised by that of the cornea. And here it is well to remember that iritis is often the main and visible link in a chain of disorder with keratitis at one end and destruction of the choroid and the retina at the other.

An inflammation of the cornea is always accompanied by more or less injection of the small, straight radiating vessels around its edge; but whenever that ring of vessels is seen, suspicion should be aroused as to the condition of the iris, and a thorough examination of the latter should be made without delay.

L. S., a married woman, aged 40, applied for treatment on the 2d of September. Her left eye had been troublesome for a month, and had been treated with various drops and lotions without benefit. There was a general haziness of the cornea, with some dotted

opacity on its posterior surface, and a slight injection of the sclerotic vessels bordering the cornea. The naturally brown iris was of a somewhat more reddish hue than in the healthy eye, and the pupil responded not at all to the stimulus of light. A few drops of an eight-grain solution of atropia produced a scarcely visible effect on the pupil, which showed, however, no irregularity in its outline. The woman was apparently in the best of health, but said that her children were unhealthy, and that she had had several abortions. She was ordered to apply locally a four-grain solution of atropia three or four times a day, and to rub ung. hydrarg. 3i in each armpit night and morning. On the 12th, the pupil was fully dilated and the eye improved.

Pot. iod., gr. x t. d., was prescribed in place of the mercury. On the 4th of October she was apparently well.

And so one might go on, almost ad infinitum, with the recital of cases of this kind, in which the sufferer is finally forced to seek relief at the hands of specialists or to endure a vision permanently impaired. And yet no disorder of the eye is more certainly detected than iritis, if only a careful search be made.

A particular set of symptoms always accompanies the affection; but while some of these are always present, the others may vary in degree and even be entirely absent.

These symptoms are: 1. *Sluggishness of the pupil under the stimulus of light.* This is the most important test of all, and is present in every case. The want of mobility results from the congestion of the vessels of the iris and from effusion into its structure. As the disease advances, pseudo-membranous attachments form to the capsule of the lens, or bands extend across the pupil, or even fill it up and prevent all motion.

If the healthy eye is closed and the other alternately shaded by the hand and exposed to the light, we can generally arrive at a pretty good notion of the condition of the iris. If, however, any doubt remains, a few drops of a four-grain solution of atropia may be placed in the eye, and in some cases, where the secretion of tears is so great as to wash away the mydriatic almost immediately, it may be necessary to repeat the application in a few minutes. After the lapse of twenty minutes or half an hour the effect on the pupil may be quite evident to ordinary inspection. If not, we can take a lens of two and a half or three-inch focus, and concentrate the light of a lamp obliquely upon the pupil. A similar lens may now be used to examine the eye, and may show us perhaps little points on the anterior capsule of the crystalline lens, left by the iris in breaking loose from its false attachments; other adhesions not yet broken down; minute specks of plastic matter on the papillary margin; or a swollen condition of the whole membrane.

Unless absolutely necessary for purposes of diagnosis or treatment, it is, however, almost a cruelty to put a strong solution of atropia into the eye of a person who is obliged to depend upon that organ in his daily occupation. The intense glare of light which often results from the improper use of atropia is distressing in the extreme, and the paralysis of the accommodation renders vision practically useless for any kind of near work. The dilatation will

last in such cases for a week or ten days, to the great annoyance and alarm of the patient.

2. *Change of color.* This is sometimes the most striking symptom at first glance. The result is such as might be produced by the mixture of a reddish-yellow with the natural hue, though it is often disguised by haziness of the cornea, or turbidity of the aqueous humor. The change in the general appearance of the iris is aided by the fact that the bright and delicate radiating fibres which may be seen to compose the healthy organ become blurred and dull.

3. *Sclerotic zone.* The rosy zone of short, straight vessels surrounding the cornea and radiating from the pupil as a centre is always present in iritis. The irregular, branching vessels of conjunctival hyperæmia may overlie this zone, but do not often hide it entirely. We must look for it through the conjunctiva, and we are aided in doing so by sliding the latter membrane about a little with the fingers, so as to heighten the contrast between the movable vessels and the fixed ones beneath. If keratitis co-exists, the zone may be due to that affection, and we must look for other symptoms.

4. *Pain.* More or less pain about the eye is always present, especially at night. But this symptom is, of course, not peculiar to iritis.

5. *Intolerance of light* is seldom entirely absent. This condition, however, may depend on other pathological changes than the one under consideration, as may also—

6. *Dimness of vision.*

Attention to these symptoms will serve to detect any case of iritis, and in its ordinary or plastic form no other will be marked. But in the serous form there may be only slight injection of the episcleral zone, the conjunctiva may be unaffected, and, while the color of the iris is but little changed, the absence of mobility is sometimes complete.

In the gummatous form we have the symptoms of a syphilitic gummy tumor of the iris superadded to those denoting an inflammatory condition of that organ.

In regard to treatment, it is well to bear in mind that cold demulcent infusions and astringent washes only aggravate the disease. The conjunctiva, therefore, may be left to take care of itself, while energetic measures are directed towards the little membrane on which so much depends.

The sulphate of atropia is from first to last an indispensable remedy. If the alkaloid itself is used, a solution of sufficient strength can be obtained only by the addition of an acid, and it is very difficult not to get an excess of the latter, with a resultant solution which is highly irritating to the already inflamed conjunctiva. A solution of four grains of the neutral sulphate in a fluidounce of distilled water forms a perfectly bland application.

It is best applied by drawing down the lower lid and placing within it, by means of a pipette or a quill, a couple of drops every hour until the pupil is fully dilated or we find that it is firmly bound by synechia. In the latter case the atropia is useless, and should be suspended until the resolvent effects of mercury can be obtained.

It will also be futile to employ atropia in the beginning, if the grade of inflammatory action is very high, or the ocular tension is much increased. The former case will need a certain amount of derivative treatment, leeching of temples, purgation, etc., and the latter the performance of paracentesis of the cornea before the mydriatic can be absorbed.

When the pupil has been once fully dilated, it is often sufficient to use the atropia once, daily, to keep up its influence; but it may be instilled oftener, of course, should it be necessary. The object is to get and keep the iris in the condition of as small a rim as possible. Even after the case is apparently cured we find it is better to continue the local influence of the drug for a couple of weeks, or until there is no longer a suspicion of iritis; not persisting too long, however, as it appears to have a tendency to produce granular lids.

The pupil should be closely examined every day or two, and if adhesions are formed or forming, we should at once resort to the administration of mercury,—preferably by inunction. If the adhesions are recent they will generally yield to a smaller amount of mercurial than is necessary to touch the gums.

Morphia, in sufficient doses to allay pain, has a most beneficial influence on the course of the disease.

In any case, it is well to fill up the space around the globe, over the closed lid, with soft cotton, and cover with a bandage. This sets the eye at rest, and aids in the contraction of the vessels, by the warmth it maintains. But in bad cases compresses wrung out of hot water must be kept constantly applied until the most urgent symptoms are alleviated.

In every instance it will be necessary to find out the cause on which the affection depends,—whether traumatic, rheumatic, syphilitic, malarial, sympathetic with the other eye, or with some pathological condition of the system,—and to adapt the treatment to the circumstances. Cases which are obviously of rheumatic origin, and without much plastic effusion, are often readily subdued by the administration of Vance's pills, one of which contains ext. colchici acet., gr. $1\frac{1}{4}$, pulv. ipecac. comp., gr. iv: one to be taken before breakfast and dinner, and two at night.

In a large proportion of cases our suspicions will be directed to a syphilitic origin, and, however unjust this may often be, it is certain that mercury is frequently indispensable to the cure: so that it is generally better to give the patient the benefit of the doubt so far as the privilege of taking the medicine is concerned.

A CASE OF EXCESSIVE ERUCTATION.

BY ALONZO L. LEACH, M.D.

THE history of the following case is presented for publication because it bears upon interesting questions in physiology, and on account of the excessive character of the eructation.

John B., Irishman, æt. 28; laborer. At noon, July 7, while in the possession of excellent health, engaged in work that subjected him to the intense heat of the sun, he became suddenly prostrated. The perspiration,

at the time profuse, was checked; he experienced extreme weakness, with vertigo and headache. In this condition he was forced to retire to a shady spot, and towards evening returned home. The following day, the above symptoms partially disappearing, he resumed work, and continued until 4 P.M., when he was seized with another attack, differing from the first as follows: violent headache, vomiting, and *belching of wind*. The next day he persisted in his efforts to work, continuing to do so until nine o'clock A.M., when he was affected as previously, the eructation lasting until noon. He returned home; passing the remainder of the day and night free from eructation, with headache and general weakness. At six o'clock on the morning of the 10th the eructation came on, twelve hours after fasting, continuing throughout the entire day, relief being afforded at its close by medicine. In this condition he remained, passing gas at irregular intervals, until July 14, when at 10 P.M. an attack of eructation began, lasting through the night and the following day and night, when he fell asleep, completely exhausted, having spent two sleepless nights. On awakening, the eructation reappeared, and continued almost constantly (temporary relief being afforded at times by the administration of drugs) until the day on which I first saw him,—August 18.

At this stage of the disease I found him profoundly anæmic, with a cadaverous appearance, much emaciated, and an anxious countenance, presenting the appearance to a superficial observer of one laboring under some chest-trouble. The perspiration was standing in drops upon the face, which was unusually pale, the lips being livid. Respiration was performed with difficulty. Gas was constantly passing from the stomach with a peculiar and characteristic noise. In conversation he was frequently interrupted, and talked with difficulty, owing to the rapid and constant eructation. The gas was odorless and tasteless. He was unable to lie down, for fear of choking, and for a number of nights had not been able to sleep except in a sitting posture. He had eaten but little for days, and now everything he ate escaped from the stomach with the gas. From the date of his attack he had lost twenty-six pounds, and he was in an actual state of starvation. He was subjected to flashes of heat, followed by coldness. All of the symptoms were exaggerated and the patient seriously affected by his coming in contact with the sun's rays. Percussion showed the stomach enlarged and tympanitic. I placed the patient at once upon charcoal, with general and nerve tonics, the result being complete recovery.

Remarks.—The first point of interest to be noticed in this case is the peculiarity of the attack. This man, while exposed to excessive heat, became affected by it. The insolation was rather of an exhaustive type, in which nervous depression predominated. With the cerebral symptoms the eructation developed itself, and the interesting inquiry is, Was it of nervous origin? We think the sudden gastric symptoms, following so closely those of a nervous character, point clearly to the brain as the primary seat of trouble. The brain, suffering from depression, became incapable of supplying the stomach with a due amount of nerve-stimulus, and it, in turn, became disordered, or else the train of symptoms was developed by an unexplained sympathetic or reflex action. We have also favoring this theory the facts that the eructation was influenced by the patient's coming in contact with the sun's rays, and that local treatment gave but temporary relief, complete recovery not taking place until all nerve-symptoms had disappeared.

The second question of interest is, From whence did the gas originate?

According to authorities on diseases of the stomach, we have three possible sources from whence gas originates in that organ.

1. Air swallowed.
2. Gas generated from the food and secretions by decomposition or fermentation.
3. Gas secreted (improperly termed) from the blood.

In the case before us we exclude the first source, and pass to the consideration of the second, it being the principal source in all ordinary cases of eructation. Here we have, in the first stages of this case, eructation coming on hours after food has been taken, and, when taken, seeming not to be affected by it. Now, it is established that small quantities of food may give rise to large quantities of gas, and we might here account for the presence of the gas on the food-theory, and admit that a process of accumulation had gone on during the act of digestion, and that hours after one would have supposed the food properly digested and absorbed, the pressure became so great as to overcome the resistance at the cardiac opening of the stomach and the gas escaped. We go a step further, however, and reach a period in the case when the eructation was excessive and constant, when no food was taken into the stomach, except at times in small quantities and that being rejected, and when the patient was actually starving. How can we account for the gas being a product of the food at this stage? Doubting this source, could it have been due to changes in the secretions? Certainly not of a putrefactive character, for the gas was odorless. Possibly a fermentative change, for we must admit the presence of secretions, with little if any food on which to act. Could this gas have originated in the stomach at all? We confess our first thought was to accept this case as proving the blood-origin, but we find arrayed against such a theory many able writers on the subject,—among them Brinton, of England. Favoring this view of the case, we have a weakened stomach and capillaries admitting of a freer escape of gas, the constant eructation demanding an inexhaustible supply, a blood surcharged with gases from the enormous waste of tissue, etc., etc.

In conclusion, does not this case agree with the celebrated experiment of Magendie, and favor the doctrine taught by many physiologists and writers on diseases of the stomach,—that gas may be excreted by that organ? Aside from these questions, the case is one of interest.

2118 SPRUCE STREET, PHILADELPHIA, March 19, 1874.

IMPACTED GALL-STONE (*The Clinic*, February 14, 1874).—Dr. Confer reports the case of a man, æt. 45, who died in consequence of an impacted gall-stone which was found firmly fixed in the cystic duct. His last sickness was of six days' duration, during which time there were persistent nausea and vomiting, with great tenderness of the abdomen, obstinate constipation, scanty urine, etc., but not the slightest discoloration of the skin or conjunctivæ, jaundice having been entirely absent.

NOTES OF HOSPITAL PRACTICE.

PHILADELPHIA HOSPITAL.

Reported by Dr. JOHN M. KEATING, Resident Physician.

FACIAL ERYSIPELAS.

IT may not be uninteresting or devoid of some practical information to present two cases, the termination of which was rather different from that generally seen in epidemics of facial erysipelas.

Case I.—T. W., aged 48, a hard drinker, entered the Philadelphia Hospital on the evening of the 10th of February. For more than a week he had been exposed day and night, while under the influence of liquor, sleeping upon cellar-doors, and deprived of proper food and clothing. He stated that four days previous he noticed upon the bridge of his nose a red patch, which extended rapidly until, when his friends brought him to the hospital, the whole face had become involved. When first seen, his temperature was $104\frac{3}{4}^{\circ}$; his face very much swollen, particularly about the upper lip and nostrils; there was some swelling also of the mucous membrane of the nose. He complained of great tension of the scalp, and pressure upon it would cause him to complain, even during the delirium, which became so troublesome as to require the nurse to strap him to his bed to prevent his wandering around the ward. The pulse was hard and quick (120). His general condition denoted the great prostration which always accompanies such diseases in drunkards.

He was ordered a tablespoonful of Basham's mixture (containing fifteen drops of tinct. ferri chlor.), with one grain of quinine every two hours, plenty of milk and beef-tea, alternating every hour; also, an external application of—

R Camphor. resin., \mathfrak{z} i;
Unguent. hydrarg., \mathfrak{z} ii.

The bowels were opened by one-sixth of a grain of calomel every hour until they were gently moved; a dose of castor oil was then administered.

Evening of 20th.—Was very delirious all day, had to be strapped in bed; drinks as much milk as he is allowed, constantly asks for it. Ordered three grains of quinine every three hours. His temperature fell this morning to 102° , and still keeps so; pulse 100; no lung-complication; no albumen in urine.

February 22.—The night-nurse reports that he slept well after he had taken one-quarter of a grain of morphia, which was ordered at midnight.

February 24.—Continues as usual; is very weak; the pulse has been varying from 100 to 120; the temperature has been gradually diminishing; on the morning of the 21st it was 101° ; in the evening, $101\frac{1}{2}^{\circ}$; morning of 22d, $100\frac{3}{4}^{\circ}$; to-day it is exactly 100° . The swelling of the face is subsiding. There is aphonia and some cough, with swelling of the mucous membrane of the pharynx, which is coated with a tenacious, grayish exudation. Inhalations of lime-water and paregoric are repeatedly given, with a gargle of chlorate of potash and tincture of cinchona. There is no lung-trouble. An enema of castor oil and turpentine was given to counteract the tympany, from which he suffers much. The delirium still continues. The whisky, which he has been taking since the 22d, was increased to one ounce every three hours, as milk-punch. Stopped Basham's mixture, and ordered simply twenty drops tinct. ferri chlor. every two hours, with two grains of quinine every four hours, and small repeated stimulant doses of tinct. opii deod.

February 26, morning.—Not quite so delirious; rested better last night; bowels have not been opened since last note; one-eighth of a grain of calomel every hour

during the day ordered, to try to resolve the membrane in the throat, and also to relieve the bowels. The deposit seems to impede respiration. The lungs are still clear. After each inhalation strips of false membrane come away, leaving a raw surface.

February 26, evening.—Crepitant râles, together with sibilant and sonorous ones, are heard over right chest. Since yesterday he has been taking half an ounce of whisky every hour; ten grains of carbonate of ammonia are added to each second dose. Poultices to chest seem to afford but little relief. Died at 2 o'clock A.M.

Post-mortem, seven hours after death. Before taking off the calvaria, there was no redness of the membranes, but some subarachnoid œdema was noticed. There was no opacity of the membranes at the base, but some basilar effusion, and more liquid than usual in the ventricles. There was decided venous congestion; the veins at the base of the brain standing out prominently, well filled. Quite an extensive deposit, resembling that seen before death upon the tonsils, was noticed, upon detaching which it was found to cover portions much ulcerated. The mucous membrane of the pharynx, larynx, and trachea was swelled and inflamed. The bronchial tubes red, and containing frothy mucus. The pleuræ of the right lung were adherent with freshly-exuded lymph; the lung itself, solid anteriorly, and œdematous posteriorly. The heart contained ante-mortem clots.

Case II.—Mary S., aged 32, a native of Germany; had previously been pretty healthy; was an assistant in the surgical wards of the hospital during the cold weather, and had consequently been exposed to variations of temperature for some time. On the 20th of December she was sent to the medical floor, complaining of cold in the head, with its usual concomitants of fever, headache, and nasal discharge. She was put to bed, the routine treatment adopted of diaphoretics, etc., with the addition of quinine in small doses. Two days afterwards, a small red patch made its appearance on the right ala nasi, which extended rapidly, and soon left no doubt as to the correctness of the diagnosis of facial erysipelas. Twenty drops of tinct. ferri chlor. were ordered every two hours, her bowels opened, quinine (twelve grains daily) given, and a dressing of ten grains of sulphate of iron to the ounce of water, frequently changed, applied to the face. The inflammation extended rapidly, and soon spread over the entire face and neck.

On the sixth day she complained of headache. Her temperature was never above 103° ; her pulse quick and wiry.

On the 1st of January I assumed charge of the ward, and found her condition as just described. Her face was caked and dry from the iron solution; her bowels had not been opened for nine days, and her state altogether pointed to anything but a favorable prognosis. Mucilage of slippery elm was now used externally, one-sixth of a grain of calomel given every hour until her bowels were moved, and followed by a dose of oil. The quinine and iron were diminished, and nourishment in the form of milk, beef-essence, etc., was given at stated intervals. She had a severe laryngeal cough, with much dryness of the throat, which was controlled by atomization with paregoric and lime-water and cracked ice. But the headache, which was supposed from her general condition to be due to this, did not disappear. Crackling râles of hypostatic pneumonia were heard posteriorly. On the 3d she became delirious, but at intervals she could be aroused, when she complained of her head. Towards evening she was seized with convulsions, which began with twitchings of the right side of the face, then the left, and finally the whole body became involved. During these attacks the pulse was strong and hard, at other times quick and irregular;

pupils contracted. Wet cups were applied to the nape of the neck, cold cloths to the head, an injection to move the bowels freely, warmth to the feet, etc., but all were of no avail: she died that evening.

A post-mortem was made early next morning, with the following result:

Hypostatic congestion of the skin more marked in places which had been occupied by the inflammation, though noticed elsewhere; the face was pale; left lung adherent with freshly-exuded lymph; the pleura markedly inflamed; right side normal.

Hypostatic pneumonia posteriorly of both lungs, with much œdema; bronchial mucous membrane red and swollen, and frothy mucus in bronchial tubes; right auricle filled with a large adherent ante-mortem clot, which extended into the ventricle and pulmonary artery. A similar one was seen on the left side. The dura mater was rather pale, and not adherent; the membranes at the base were decidedly opaque, particularly around the medulla oblongata, pons, and cerebellum. In the sulci of the brain posteriorly there was a serous exudation, but towards the anterior portion this was replaced by a gelatinoid substance beneath the pia mater, which in places was about one-tenth of an inch in thickness. Where the deposit rested upon the brain the surface was pale; at other portions beneath the membranes there was marked congestion. The ventricles contained but little fluid.

The principal points of interest in these cases were the extension of the inflammation inwards, the total failure of treatment, and the gloomy prognosis which they teach in all such cases, where there is much brain- or lung-involvement. A number of cases of this disease have been treated here during the past quarter, presenting different types and complications. The usual treatment adopted was a supporting one mainly, commencing with an emetic or purgative, immediately followed by iron and quinine in rather large doses, milk, beef-tea, etc., and stimuli, when indicated by great exhaustion or previous habits. The local application which seemed to be most grateful was either oxide of zinc ointment or cloths of lead-water and laudanum. In four of the cases whose temperature-record was accurately kept, the maximum was reached on the third or fourth day. A sudden deflorescence succeeded this, and within thirty-six hours from the maximum (forty-eight at the utmost) the temperature became normal, or even went below it, in one case to 97° , and in another to 96° . In one case, that of a young girl, in whom there was no complication, the maximum was reached on the evening of the sixth day, and by a gradual deflorescence the temperature was $98\frac{1}{2}^{\circ}$ on the eleventh day. Of course the number of cases here quoted is too few to establish a precedent. The main object in speaking of them is to show that a very gradual descent in the temperature-curve does not always denote a complication, but that a serious complication may exist without an extraordinarily high temperature.

TRANSLATIONS.

TEMPERATURE OF THE HEART AND LUNGS.—Ed. Albert and S. Stricker assert (*Wiener Med. Jahrbücher*) that when measurements of the temperature of the heart are made by introducing the thermometer into the cavities of the heart, so that it is exposed to the blood, the results obtained are not accurate, since the instrument is influenced both by the temperature of the heart and by that of the blood. To avoid this source of error, they inserted the bulb of the thermometer into a pocket in the muscular tissue of the heart, and found that they

obtained in this way a temperature 0.5° to 0.7° C. higher than that given when the bulb was only placed in contact with the surface of the inner wall of the ventricle. The supposition that the temperature of the substance of the heart is higher than that of the blood (at least in the left ventricle) was confirmed by a second experiment. A thermometer was passed from the aorta into the ventricle, and a difference of but 0.1° in favor of the temperature of the blood in the heart was noted; but after death a difference of 1° between the temperature of the ventricle and its contents was noticed.

The right auricle was found to be higher in temperature than the descending cava, and the right ventricle still warmer than the auricle, while the temperature in the ventricle rose as the apex of the heart was approached. The differences in temperature were not removed by ligation of the ascending cava, but were in some cases increased. The variations in the right ventricle are not due alone to the higher temperature of the ventricle, but also to the lower temperature of the blood of the descending cava as compared with that of the ventricle itself. It was supposed that the blood of the descending cava was warmed by the blood of the coronary veins, and this was proved by measurements of the temperatures of the blood in the descending cava and the pulmonary artery respectively, the ascending cava having been ligated. They found, also, that the temperature of the blood in the pulmonary veins is lower than that of the blood in the descending cava, and conclude from this that the blood is cooled in its passage through the lungs. There is, however, an element of doubt as to the temperature of the blood in the pulmonary veins, for as the thorax was opened it is possible that the temperature of the lungs was thus lowered, and with it that of the blood contained in them. W. A.

ACUTE YELLOW ATROPHY OF THE LIVER IN PREGNANT AND LYING-IN WOMEN.—A. Dupré (*Centralblatt für die Med. Wissenschaften*) recently had the opportunity of observing the post-mortem conditions found in three cases of poisoning by phosphorus and one case of acute yellow atrophy of the liver. The patients who were poisoned with phosphorus were children aged from ten to fifteen years; the one who died from the disease of the liver was a young woman of eighteen years, who had recently been confined.

In the livers of the first three cases he found a disposition to an enormous formation of fat, there being in the most advanced stage fatty infiltration of the entire parenchyma of the organ, and finally absorption of the fat which became free by bursting of the liver-cells, but there was no proper destruction of the tissues of the liver. In the acute yellow atrophy there was found parenchymatous inflammation, and in some places there were also evidences of interstitial inflammation. He has sometimes noticed fatty infiltration in addition to these changes, but this is by no means constant or characteristic. The results of these changes are molecular degeneration and metamorphosis of the hepatic tissues into a finely granular detritus, often mixed with molecules of fat. Dupré, therefore, regards the parenchymatous inflammation of the cells of the liver as the essential characteristic of this disease, from which pressure upon the smaller gall-ducts results, producing icterus. As in all glands, obstruction of the ducts causes a degeneration of the cells, and they undergo fatty atrophy. W. A.

THE INFLUENCE OF DIGITALIN ON THE BLOOD-PRESSURE OF MAMMALS.—R. Böhm (*Dorpat. Med. Zeitschr.*) maintains his former conclusion that the increased blood-pressure consequent upon the administration

of digitalin can be explained only by assuming an increased energy of the heart's action.

After section of the medulla oblongata in cats and dogs, care being taken to avoid injury to surrounding parts, the blood-pressure is diminished by about one-third of its force. If digitalin is injected into animals that have been thus operated upon, but a slight increase in pressure is produced: a return to the normal amount is never noticed. In order to disprove the assertion of Ackermann that the increase of pressure in the arterial system after the administration of digitalin had a peripheral origin,—namely, contraction of the peripheral arteries and more especially those of the abdomen,—Böhm, after section of the medulla oblongata, ligated the thoracic aorta above the origin of the great abdominal vessels. After this had been done there was for some time a variation in the amount of pressure, which soon, however, became fixed at a point almost normal. If injections of digitalin were made in animals under these conditions, the pressure increased, and the contractions of the heart became more powerful; a diminution in the energy of the heart was first noticed when the doses of digitalin were markedly increased. The increased blood-pressure due to the administration of digitalin is caused only by increased energy of the contractions of the heart.

W. A.

CAUSES OF THE PATHOLOGICAL CHANGES IN THE LUNGS CONSEQUENT UPON SECTION OF BOTH PNEUMOGASTRIC NERVES.—A. Genzmer (*Pflüger's Arch.*) draws the following conclusions from a series of experiments which he has been making, relative to the influence of the section of the par vagum on the lungs: 1. The change in the activity of the heart caused by section of the par vagum has no influence upon the condition of the lungs. 2. Edema of the lungs does not follow the constraint in breathing due to paralysis of the recurrent laryngeal nerves. 3. The entrance of saliva into sound lungs does not cause the change noticed after section of the pneumogastric nerves. 4. Hyperæmia and oedema of the lungs occur after section of the par vagum when no foreign bodies (as saliva) find entrance into the bronchi. 5. Paralysis of the branches of the par vagum distributed to the lungs causes a pathological change in the tissues of the lung. Paralysis of the same nerve-branches of one lung causes characteristic changes, especially a marked hyperæmia, and this, together with the diminished power of resistance of the lung, allows a second cause of irritation, as the entrance of saliva, to produce the characteristic changes. W. A.

THE INFLUENCE OF THE ACTION OF THE SKIN ON THE SECRETION OF URINE.—K. Müller reports (*Arch. für exper. Path.*) the results of some experiments conducted by him in Claude Bernard's laboratory, upon large dogs, in reference to this subject. The dogs were narcotized and operated upon, so that the urine could be collected as it came drop by drop from the ureters. Six experiments were made with ice-cold compresses, upon dogs which had previously been shaved, and it was found that the amount of urine secreted was increased from twenty-three to fifty per cent. This increase was not noticed until the application had been made for some ten to twenty minutes. Three experiments were made with warm compresses, and by baths of water at the temperature of 40° C., with the result of diminishing the secretion 17 per cent. Mustard plasters and blisters were allowed to remain for thirty minutes, but produced no change; and in three cases out of seven in which the skin was varnished, but a slight diminution in the amount of secreted urine was noticed. W. A.

PHILADELPHIA
MEDICAL TIMES.
 A WEEKLY JOURNAL OF
 MEDICAL AND SURGICAL SCIENCE.

The Philadelphia Medical Times is an independent journal, devoted to no ends or interests whatever but those common to all who cultivate the science of medicine. Its columns are open to all those who wish to express their views on any subject coming within its legitimate sphere.

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EDITORIAL.

THE USES OF HOSPITALS.

IN a recent editorial we endeavored to enforce the axiom that those who have opportunity have also responsibility; that the hospital physician owes it to himself, owes it to his brethren, and owes it to humanity, that he advance in some way our knowledge of healing. It is urged in answer that it is not every even good practitioner who has the ability to do this. Of course not; we can't all be cream; but we do object to the skim-milk rising to the top and usurping the place of the cream. Any man who for a succession of years holds a hospital position and does not add anything to the common stock, ought to be skimmed off: which is the long and short of our story.

As our hospitals are organized and furnished, however, even a Hunter or a Louis could do little or nothing, unless he had abundant leisure or had the pecuniary ability to pay, as some of our hospital physicians now do, a younger man to take notes of his cases. But clinical clerks are only a small part of what is needed. A fitly-furnished hospital should leave its staff no excuses in the direction of lack of help and instruments; whilst, so far as we know, there is not in the city of Philadelphia to-day a single general hospital thoroughly furnished with all the important modern instrumentalities *for the treatment of disease, let alone for its investigation.* What folly, then, to blame the staffs for accomplishing so little! Is it not a farce to expect Philadelphia to maintain its prestige when not a single

general hospital in its confines has a properly fitted-up electrical room, and when not a general or a special hospital in its limit has proper bathing facilities? Is it a wonder that our glory is departing, and that already "Ichabod" seems lambent over us?

We doubt if any of our hospitals have more than a pretence of a laboratory, and we know of none that has well-appointed dissecting-rooms.

Will the new school hospitals remedy these things? Let us hope that the first good work they accomplish will be the shaming of our managers into thoroughly furnishing the institutions under their care. Surely, if our new hospitals do not redeem us, we may well join in the goblin's cry of "Lost! lost! lost!"

No amount of apparatus, however, it seems to us, will be of much use so far as the study of disease is concerned, unless some new plan or plans of organization are adopted. Take as an evil example of the present system the great city hospital. Its attending staff contains men of marked ability. Its wards overflow with such chances as have made the wards of La Salpêtrière famous through the work of Charcot and his scholars; but the younger physicians come to it fresh and utterly untrained, so that probably not one man in twenty could take, on entering the wards, clinical notes of the least value. Before they have become trained to this duty, which is not imperative upon them, and which they may or may not care to fulfil, a new set succeeds them, and the same wearisome drill is to be gone over once more. The system may be very well as a means of training medical apprentices, but it imposes needless duties on the attending staff, and places sad obstacles in the way of fruitful work. What we want is a set of intermediate men, who shall come between the heads of wards and the fresh hands; men who shall be more permanent, and a part of whose duties shall be to relieve the attendants-in-chief and to follow out under their directions such lines of study as they may plan. Neither should any hospital lack the constant aid of at least one well-prepared chemist, since it is out of the question to look for knowledge of this kind in young physicians untrained to laboratory work; yet we doubt if even to-day there is one available man in Philadelphia capable of making an analysis of blood.

The organization of the new University Hospital is completed, at least on paper; and whilst it is certainly much better than that of any of the older institutions, we think it will have to be modified before it will be anywhere near perfect. The plan of the organization is as follows. There are general, surgical, obstetrical, and medical wards, and

certain special wards,—at present four in number. The resident staff consists of four members: two chief residents, and two assistants. The assistant obtains his position by a competitive examination, and at the end of six months, if he has given satisfaction, is promoted to the position of resident; the whole term of service being one year. As the hospital cannot possibly open with more than a hundred beds, this arrangement is perhaps the best that can be made, since more than four residents could not be maintained with justice to the charity. The assistant acts as clinical clerk, and as an assistant to the resident, who is responsible to the visiting medical officers. Owing to the service being so broken up into specialties, it is evident that when the hospital becomes larger the present organization of the residents would give rise to endless confusion,—two or three of the chiefs wanting the attention of one resident, it might be, at the same time. Fortunately, the right and the will to alter the arrangement as circumstances demand it both exist. It has occurred to us that if, when the hospital is capable of six residents, the time of service were lengthened to eighteen months, so that a resident should serve six months as assistant in the general wards, six months as full resident there, and six months in charge of special wards, the peculiarities of the case would be well met. But let this pass. We are not advocates of any special plan of organization. What we want to see recognized in the new hospital is the principle that all proper facilities for original work should be furnished, and that the performance of such work should be a recognized part of the duty of the staff.

TO those practitioners who see a large number of patients daily, and are not blessed with a remarkable memory, we can commend very highly the office and pocket Case Record Books of the Case Record Company, of Cincinnati, as nerve-saving machines, and as tending to certainty of practice. They are simply blank books, conveniently printed, and arranged so that on one part of the leaf the doctor writes the prescription to be torn off, and on the other copies this, and, if he chooses, fills up a short formula, so as to constitute a brief history of the case.

WE are glad to see that the medical staff of the Orthopædic Hospital have profited by our counsel, and have instigated the board of managers to take their "before and after treatment" woodcuts out of their annual reports.

THE homœopaths will soon be following the lead of Prof. Clinkscales of the eclectic faculty, in asking, Who and what are we? We observe that out of eleven medical books reviewed in the *Ohio Medical and Surgical Reporter* (homœopathic) for January and March, eleven are standard works of the regular profession,—all of them either already noticed or about to be noticed in the pages of the *Times*. In nearly every case our homœopathic contemporary recommends these works very strongly to its readers. Verily, homœopathy is passing away: in the downward path after the stage of delusion comes the stage of fraud.

PROCEEDINGS OF SOCIETIES.

PATHOLOGICAL SOCIETY OF PHILADELPHIA.

THURSDAY EVENING, MARCH 12, 1874.

THE PRESIDENT, DR. WM. PEPPER, in the chair.

DR. JOHN H. PACKARD presented a specimen of *mammary cancer* from Mrs. T., æt. 70, English, mother of six children, only two of whom lived to adult age, and they died of consumption. Her last confinement was twenty-five years ago. Lactation was always normal, without abscess or other difficulty.

The present growth made its appearance as a very small knot, a year or two ago. It began to enlarge rapidly, and occasionally to give her pain, about four months ago. General health perfect. The growth—about the size of a lemon—and the atrophied gland were removed, by operation, March 3, Dr. L. Starr giving ether, and Drs. John Ashhurst, Jr., and Brinckle being present and assisting Dr. Packard. Three or four vessels were secured by torsion. The wound was closed with hare-lip sutures, and carbolized cerate applied.

The case has done well.

Dr. PACKARD also presented the *arteries from the brain of an apoplectic*. Mr. S., æt. 47, seemed in perfect health on the morning of March 5. At 12.30 he was found insensible in the water-closet, at a hotel.

When seen by Dr. Taylor he was partly conscious, though unable to speak. Pupils not markedly abnormal. When asked if the cold applied to his head felt good, he nodded; and when asked where he had pain, he put his right hand under the back of his head. The left arm and leg seemed paralyzed; the exact degree was not noted. His pulse was feeble, his surface pale and cold, and he seemed in a state of collapse. He swallowed two teaspoonfuls of whisky.

When Dr. Packard first saw him, his face was pale, his breathing stertorous; pupils contracted equally; occasional strabismus, and he was totally unconscious. Sinapisms were ordered, also stimulating injections; ice to head, and afterwards cups to back of neck and temples. Reaction took place; great heat of skin; pulse full and tense; right pupil now became dilated; left contracted. He was bled from the arm to about ten ounces, without any effect but to lower the pulse. Death occurred about ten hours after the seizure.

Autopsy, sixty-one hours after death. Head only examined. Some decomposition had occurred. Vessels of the dura mater much congested. A large quantity of coagulated blood effused beneath the pia mater at the

base of the skull, extending up on the outer surface of both cerebral hemispheres, and dipping into all the anfractuositities. The clot seemed to extend down along the spinal canal; it filled the third and fourth ventricles, as well as the right lateral ventricle, which was enormously distended by it. The left lateral ventricle was full of bloody serum.

Several vessels seemed to run through the clot in the right ventricle, and to one of them was attached a small firm bilobed body.

The brain-substance was universally softened; but whether this was a post-mortem change or not, was not apparent.

Dr. R. M. BERTOLET exhibited specimens of *multiple gummata of the cranial bones and dorsal vertebrae, giving rise to extensive destruction of these structures, leading to compression of the spinal column and inducing paraplegia.*

"The accompanying skull and spine were removed from the body of a patient who died at the Philadelphia Hospital. Owing to the low condition of the man when admitted, and to the fact that he was unable to speak any but his own language, very little could be ascertained as to his previous history. Drs. Miller and Keating, resident physicians to the hospital, have, however, kindly furnished me with the clinical records of the case, from which the following summary has been made:

"Edward Paulisky, æt. 34, a native of Poland, was admitted into the hospital October 14, 1873. He complained of dull pain in the back, and of obstinate constipation. Stated that he had had gonorrhœa several times, and when quite young had a sore on the penis. Did not recollect having had any secondary manifestations. In all other respects had been a very healthy man.

"The patient was at once put upon iodide of potassium, and improved somewhat for several weeks. In December he began to complain of pain in the region of the kidneys, and tube-casts were detected in his urine. He was then placed under treatment for his renal troubles, the iodide of potassium being discontinued. During the following month the pain in his back became so intense that he was carefully examined for aortic aneurism; but no evidences of such a condition could be detected.

"About six weeks before his death (February, 1874), gradual loss of both motion and sensation was noticed in both legs, finally amounting to complete paraplegia. The obstinate constipation persisted throughout, but the bladder was controllable.

"No further records of the autopsy were preserved than these specimens, yet they in themselves are of sufficient interest to merit further study. The skull, which is so freely riddled with more or less complete perforations of various sizes, presents no other evidences of syphilitic alterations than those occurring in the immediate neighborhood of the gummata. Many of these growths can still be seen hanging loosely in these circular cavities, while the peripheral bony margins show an inflammatory process of hyperostosis and sclerotic thickening to be going on. A directly opposite process, leading to rarefaction and atrophy of the bony structures, has been induced in the centre by the pressure of the gradually-expanding tumors. At numerous points, where the perforation through both compact bony layers is incomplete, it will be seen that the erosion extends now more towards the external periosteal surface, while at other places again the pressure of the gummata has evidently been greatest in the direction of the cranial cavity, leading to absorption of the endocranial plate, the external covering remaining intact. There can be little question that in this instance the seat of these syphilitic gummata has been in the diploë, and not subperiosteal, a fact which goes far towards explaining why

their presence was not manifested during life, neither by any elevations beneath the integumentary coverings, nor by any ulcerations in the same.

"Upon the anterior surface of the spinal column no less than six large, round, circumscribed tumors are seen. Their presence in this situation has likewise given rise to extensive destructive inflammation. The second dorsal vertebra has been almost completely broken down, permitting a very decided bending of the spinal column at this point. The presence of one of these growths upon the surgical neck of the third rib upon the right side has led to such extensive destruction that a fracture at this portion of the rib has occurred.

"Upon the posterior aspect of the spine but two of these tumors are seen: one is situated upon the left side of the fifth and sixth dorsal vertebrae, the other upon the right side of the ninth. At both points the growths protrude so far into the cavity of the spinal canal as to press firmly upon the spinal cord. In the latter, extensive gray degeneration of the posterior and lateral columns has taken place. The microscopic appearances of these alterations will be described upon a future occasion.

"The sections of the gummata show, at many points, commencing cheesy degeneration. Sections made through specimens hardened in bichromate of potash show that there is a concentric arrangement around the thickened blood-vessels of the highly corpuscular parenchyma of the tumor. Bands of connective-tissue fibres are seen coursing through the field at wide intervals, the interstices between them being completely filled with the small, round, corpuscular elements."

The PRESIDENT said it was on a single occasion only on which he had examined the patient. He was then confined to bed, and complained of intense lumbar pain radiating along the lumbar plexus of nerves. He had understood the man to be syphilitic. There was abnormal pulsation of the abdominal aorta, but he concluded that it was due to mere irritation of the vessel. There was no distinct tremor, or bruit, or thrill, and there was no increased size of the artery. The man was at that time also feeble in his limbs, but there was no complete paralysis. Subsequently he learned that there were unilateral anæsthesia, and motor paralysis, and that the case terminated in convulsions.

The PRESIDENT also asked Dr. Bertolet whether gummata originating in the diploic structures of bone were much more rare than those springing from the subperiosteal tissues.

Dr. BERTOLET said they were more rarely met with; that those gummata characteristic of protracted syphilis and hereditary syphilis manifest themselves in the medullary portion of the bone; whereas in the more recent cases attended by roseola and the papulous syphilides we have usually the periosteal gummata.

Dr. BERTOLET also exhibited a specimen of *epulis*, and said, "It is through the kindness of Dr. Thomas Stellwagen that I am enabled to exhibit this tumor to the Society. We have here a bicuspid, removed from the lower jaw, to which a fragment of the alveolar process is seen firmly united. The tooth was removed from a middle-aged lady, and with its extraction ended what had been, no doubt, a very bad toothache, for there is attached to it a pear-shaped, distinctly nodulated growth, which upon closer inspection is found to arise not from the tooth, but from the periosteum of the adherent bone.

"The tumor is half an inch in length, and measures a quarter of an inch in diameter at its widest part: it is covered with a dense capsule of connective tissue, which at a few points is beginning to undergo calcification. The interior of the growth is filled with a soft, reddish substance, throughout which an imperfectly radiating, denser substance can be seen by the unaided eye.

"The microscopic examination shows the structure to be composed of round nucleated cells, many seen as apparently free nuclei; there are also present numerous giant or myeloplaxic cells, *i.e.*, irregularly-shaped parent-cells of enormous size, containing each from five to twelve daughter-cells. Spindle-shaped cells are also seen, but the round-celled variety predominates. Of these appearances, the existence of the multinuclear giant-cells alone suffices to disclose the sarcomatous nature of the epulis. The fact that the so-called epulides belong to the class of sarcomata was first pointed out by Virchow. They are more frequently found upon the lower than upon the upper jaw, where they may attain, when not interfered with, quite a considerable size. It is seldom that these growths are seen at such an early period of their existence and removed with the same facility as happened in this instance. The interest attached to this specimen lies in the fact that although the tumor unquestionably starts from the periosteal layer of the bone, yet its growth has been inwards at the expense of the cancellous tissue, which has been partially absorbed, and a cavity formed, out of which the tumor is readily lifted. The base of the tumor being opposite the neck of the tooth, it becomes an easy matter to conceive how the less-resisting cancellated structure necessarily first yielded to the gradual expansion of the tumor, which was thus made to assume a position as though it were a central osteo-sarcomata, when in reality it pertains to the periosteum and not to the medullary portion of the bone. The presence of the multinuclear giant-cells does not in the least militate against the view of the periosteal origin of the tumor, since they are found in the periosteum as well as the intraosseous sarcomata of bones generally."

The PRESIDENT presented a specimen of *enormously distended stomach, in connection with caseous consolidation of the left lung, with several abscesses simulating pneumothorax.*

Patrick Quirk, æt. 45, had been under observation for over a year, suffering with aggravated diabetes mellitus. It was found impossible to restrict his diet, and he habitually ate and drank most inordinately. A few months before his death, symptoms of pulmonary disease appeared, and rapid consolidation of the left lung followed. A little later, the physical signs of a cavity in the left mammary region were detected. At this time his morbid craving for food and drink rapidly diminished, and the amount of urine to the proportion of sugar fell. Some days afterwards it was noticed that the dullness which had been present over the lower lobe of the left lung was replaced by large, metallic, tympanitic percussion-resonance, extending from the base of the thorax up to the fourth intercostal space. The quality and volume of this tympany were carefully compared with the resonance over the left hypochondrium, and appeared distinctly different. There were also amphoric breathing and vocal resonance over the antero-lateral part of the left chest, below fourth rib; distinct and very constant metallic tinkling, and marked succussion-splash. These signs evidently suggested pneumothorax, and the sign which chiefly opposed the idea of its presence was the existence of numerous bubbling râles heard apparently superficially over the entire antero-lateral region of left chest.

The diagnosis of pneumothorax circumscribed below the level of the fourth interspace was determined upon. The patient rapidly sank, and died.

At the autopsy, the chest and abdomen were opened, and the organs examined *in situ*. The left lung was solidified throughout from cheesy infiltration, with four abscesses of considerable size,—two in the lower part of the upper lobe, and two in the lower lobe. There was no pneumothorax; but the pleuræ were in contact throughout, and were, in parts, coated with fresh lymph.

The right lung was comparatively healthy, containing but a few scattered nodules of cheesy deposit.

The stomach was enormously distended with gas, and pressed very forcibly up into the concavity of the diaphragm.

It was evident, therefore, that the phenomena above described, which so closely simulated pneumothorax, and which occurred in a case when pneumothorax might have been expected, were dependent upon an enormous stomach, in connection with a consolidated lung, the seat of several abscesses of considerable size.

Dr. H. LENOX HODGE asked whether the stomach was unusually distended by gas.

The PRESIDENT said not at all, except in this instance of sudden distention with flatus, which must have occurred between two of his visits. After this, the man was much oppressed, but did not refer to stricture of the stomach. He had little appetite or thirst; there was no eructation of gas. He was, moreover, at this time dull in intellect, and a very small quantity of opium now acted as promptly as a much larger quantity at an earlier period.

Dr. W. W. KEEN read a paper on *chlora* as preservative of anatomical and pathological tissues (published in the *Medical Times* for March 21, 1874).

REVIEWS AND BOOK NOTICES.

THE SPHYGMOGRAPH: ITS PHYSIOLOGICAL AND PATHOLOGICAL INDICATIONS. The essay to which was awarded the Stevens Triennial Prize by the College of Physicians and Surgeons, New York, April, 1873. Two Hundred and Ninety Illustrations. By EDGAR HOLDEN, A.M., M.D. 8vo, pp. 169. Philadelphia, Lindsay & Blakiston, 1874.

We confess that, after considerable experience with Marcy's Sphygmograph in the wards of a large general hospital, we have come to look upon it as a kind of medical toy, giving at best indications of disease which are more readily and certainly discoverable by other means. It may be true, as Dr. Holden asserts, that the disappointment which has arisen from its use is attributable to faults in its construction, which have been overcome by the modification of the instrument described in this essay. We shall attempt—although it is a difficult task without diagrams—to give our readers some idea of the nature of the alterations which the author has made. The spring of his instrument, instead of pressing down upon the artery, as in Marcy's, partially surrounds it, and, as a consequence, the displacing, and not merely the lifting, power of the vessel is utilized. Thus with each pulsation a force is transmitted not only upwards, but in oblique directions, the preponderance being towards the side upon which the spring may be inclined. "Prolong," he says, "the pulse-spring, and shorten the distance between the point of attachment (the fulcrum) and the point of pressure, and this upward and oblique movement is evident to the eye. To amplify this, allow the free and distal end to be bent as an inclined plane on the curve of a circle; polish it to obviate friction; magnetize it, if desired, to add a repellent power to the power already evident, and allow it to impinge against another lever quite near its attached extremity, make this last flexible, and its distal end will move with regular, accurate sweep under the distensible power transmitted." The movement obtained by this means is from side to side, and in consequence the paper to receive the tracing may lie as in ordinary writing. To make the tracing, an ordinary pen is used, pivoted in such a manner that the paper, and not the delicate

lever, carries its weight. The amount of pressure upon the artery is regulated by making the attachment of the pulse-spring to the body of the instrument by means of a coil of watch-spring, whose tension should be controlled and measured on a dial at will, an amount of pressure being possible beyond any requirement, and reaching four, five, or six points. These are the principal parts of the instrument; the accessories are very much the same as in that of Marcy. The principal advantages claimed by Dr. Holden for his sphygmograph are its cheapness and its ready applicability. No fastenings are employed, and hence there is no interference with the venous circulation. Moreover, no preparation is necessary; not even in most instances the preliminary rolling-up of the sleeve. The instrument is held by the finger and thumb of the left hand, the paper introduced, the ink applied, and the watch-work started by the other hand.

This is certainly a great simplification of the instrument, and it may be the more regular manner in which the pressure is applied will render its tracings more reliable as evidences of disease. We are not, however, prepared to admit that it has reached such a degree of excellence and perfection as to agree with its inventor in thinking that the "sphygmographic record of an applicant for life-insurance would be the safest record he could present as a test for his condition." That it may be relied upon too much, one of the cases reported by him shows, where, in consequence of what was regarded as a normal tracing, a limb was amputated, in defiance of the rules of good surgery, for gangrene, before the line of separation had formed. In fact, in the two hundred and ninety illustrations which he gives the tracings vary materially, and those obtained from healthy persons differ in many instances so slightly from those obtained from the sick that the physician who intends to depend upon the sphygmograph to indicate to him the existence of disease or its nature will find it necessary, if he is not blessed with an unusual memory, to carry a chart with him in his visits to his patients.

The last part of the book is devoted to some very carefully-recorded experiments made by the author with gelseminum, aconite, cannabis indica, and the sulphate of quinia. The tracings of the sphygmograph enabled him to determine that gelseminum, while it reduces the frequency of the pulse, increases the arterial tension, and after a time produces impairment of the heart's action in consequence of a toxic influence upon the nervous system. Aconite, on the other hand, he has found to reduce the frequency of the heart's action without increasing arterial tension.

We have not sufficient space at our command to justify us in entering into fuller details of the contents of the book, some idea of which may be derived from the titles of some of the chapters; they are as follows: "Indications Afforded by the Pulse;" "Translation of Tracings;" "General Properties observable by the Sphygmograph;" "The Practical Application of the Sphygmograph," etc. Dr. Holden is inclined to ascribe the dicrotous wave to the fact that "during the most violent portion of the propulsive effort of the heart, the onward movement may be almost uniform throughout the calibre of any given remote artery,—as, for example, the radial; but as this diminishes, the slowing of the current must appear in the part of it nearest the coats of the vessel, according to a well-known philosophical law, the best exemplification of which is seen in a running stream. In a tube of small dimensions another principle is introduced,—viz., that known as capillary attraction. In both cases, however, the same thing is true: the central part of the current is the last to fail and cease. These two philosophical facts seem to explain in every particular the phenomena of dicro-

tism. Under all circumstances, except those of such rigidity of arterial coats as to resist slight impressions, the condition might be educated. Careful adjustment of the instrument shows this to be true." He supports his theory by the fact that the wave is increased whenever the arterial tissues are in a state of atonic relaxation, or whenever the amount of blood thrown into the aorta is small, an event usually accompanied by the former condition.

The book has the advantage of being well printed on very good paper, and will, we doubt not, be interesting to those who use the sphygmograph. J. H. H.

HAND-BOOK OF MEDICAL AND SURGICAL REFERENCE. By JOHN A. WYETH, M.D. New York, William Wood & Co., 1873.

THE PHYSICIAN'S DOSE- AND SYMPTOM-BOOK. By JOSEPH H. WYTHES, A.M., M.D. Eleventh Edition, Revised. Philadelphia, Lindsay & Blakiston, 1873.

These books are of the same grade and of similar character, affording excellent ready-made patches to cover the bare places of ignoramus who are reckless enough to trifle with human life,—pocket editions ostensibly of the science and art of healing, but, in reality, of the science and art of killing. Dr. Wyeth dedicates his book "To the Young Men of the Medical Profession of the United States who are ambitious to succeed." We would amend this to read, "To the Young Men of the Medical Profession of the United States who are so foolish as to believe that success can be achieved by carrying in the breast-pocket knowledge which ought to be in the head." In conclusion, we have a word to say to those who feel a need of such books as these: Let this need show you your ignorance, and demonstrate the necessity of further education in your profession. Let it warn you not to touch the holy things with sacrilegious hands; not to assume, unprepared, the solemn responsibilities of life and death; not to become, through ignorance, pestilences walking at noonday.

SELECTIONS.

WRITING on the action of chemical substances upon the teeth, Prof. J. Foster Flagg uses the following language (*Dental Cosmos*, April, 1874). As he has had a very large experience, and justly enjoys the reputation of being a close observer, great weight seems to us to attach to his words:

"I must at this time, however, direct particular attention to the decided difference which we find to exist between the ordinary chemical action of acids upon such salts and organic tissue as compose tooth-structure and that action which results in caries, for it seems to be no less than *entirely* different. Frequent and long-continued experimentation has failed, in almost every instance, to produce any result which could be considered as analogous to caries; and when, in isolated instances, teeth have been subjected to influences, either accidentally or designedly, which have proven adequate to the induction of a semblance of this disease, it has been found that either the concomitant of galvanism in some form might easily be indicated, or that microscopic research has proven the existence of such pathological conditions structurally as would indicate decided local predisposition to decay, if even the incipency of actual caries had not been announced by decided 'tubular consolidation.' This latter has been invariably found in the comparatively limited number of examinations of this condition which I have personally been able to make.

"It is somewhat curious, in connection with all the various published results of experiments as to the effect upon teeth of an extended list of so-called injurious articles, embracing the many acids which are in daily use, such as acetic, citric, tartaric, malic, lactic, etc., together with sugar, meats, etc., that we remark only the effects noted, day after day, of enamel so altered in appearance as to have lost its brilliancy, or at length so altered in structure as to be easily scraped away with the finger-nail, or again, of dentine and cementum so softened as to be cut or even bent, and yet no particular mention made of the fact that these results were so unlike caries in every particular as to cause astonishment at their universally allotted position in the books in chapters upon this disease.

"Further than this, I have found repeatedly the most beneficial effects produced by the administration of medicines which, used locally in the seemingly accepted method of experiment, would be disastrous in the extreme; for example, nitro-muriatic acid will be recognized as eminently destructive of tooth-tissue, and thus is almost always prescribed with caution in this direction, and with injunctions that it shall be taken through a glass tube lest it make the teeth 'decay.' I have yet to see the first case of dental caries which I could attribute to the use of any acid medicine, while I have again and again seen remarkably *prompt cessation of dental tenderness and tendency to caries*, resulting from local weakness of tooth-structure consequent upon long-continued biliary difficulty, from the administration of fifteen to twenty drops of nitro-muriatic acid daily.

"It has for many years been accepted by observant dental practitioners that teeth are injured, to a certain extent, by the long-continued use of acid medicines; but it has also been noticed that the injury is *general*, just as in the ordinary experiments with acids, that enamel suffers most of all dental tissues, that it loses its brilliancy and density of structure, and that the cases in which this occurs most markedly are usually those in which the precaution of the 'tube' has been faithfully relied upon.

"For this reason, I have taught that the 'tube' was unreliable for the purpose used, and that such injurious action as was liable to ensue from acid medicaments should be prevented by rinsing the mouth *thoroughly* immediately after swallowing the medicine, using for this purpose water to which had been added a few drops of solution of ammonia, or in which had been dissolved a small quantity of bicarbonate of soda.

"Solutions of alum, which are frequently prescribed for many kinds of sore mouth, are found to be injurious in a general way only; acting more or less severely, according to frequency and continuance of applications and strength of solutions; these roughen and soften the enamel, and necessarily accelerate the progress of decay in already-formed cavities, but never seem to cause decay of the teeth in the circumscribed and localized manner which pertains to dental caries."

GLEANINGS FROM OUR EXCHANGES.

WOUND OF THE RIGHT ILIUM (*Trans. of the Medical Society of Virginia*, 1873).—Dr. S. C. Gleaves reports the case of a stout, athletic man æt. 35, who was shot with a Colt's navy pistol, the ball taking effect near the middle portion of the ilium, two inches below the crest, passing downwards and inwards nearly in a line with the symphysis pubis, and fracturing the bone through the crest. Contrary to orders, on the following day he rode ten miles on horseback. In a week he had slight fever and

great pain; the wound suppurating a little. In three weeks he had high fever with violent pain, the wound having ceased to suppurate for several days. The probe passed easily for three inches, but then met with resistance; water-dressings, morphia, and mercurial purgatives were ordered. In two or three days he improved somewhat, but about three weeks later grew much worse again, became weak and emaciated with heavy night-sweats, chills, anorexia, and symptoms of pyæmia and speedy dissolution. Careful palpation gave evidence of fluid in the pelvic cavity. There was no discoloration or tenderness in either the perineal or inguinal region. It was then resolved to trephine the pelvis. Brandy being administered, the patient was placed on his left side, his legs slightly flexed, and chloroform was administered. An incision three and a half inches long was then made through the glutei, directly above the great sciatic notch, and the parts were carefully dissected to the bone. A trephine was applied, and its withdrawal was followed by a full flow of sanious pus, thick and offensive. A digital examination did not reveal the presence of the ball. After a pint and a half of pus was discharged, a compress was applied and brandy and morphia given. From this time for three months a pint of pus was discharged daily, the patient taking three times in the twenty-four hours fifteen drops of tincture of the chloride of iron and three grains of sulphate of quinia, and using in the same time a pint of brandy or rye whisky. He was confined to his bed for five months, losing thirteen gallons of pus, and drinking sixteen gallons of whisky and brandy. He finally recovered entirely.

CHLORAL HYDRATE AND CAMPHOR AS A LOCAL APPLICATION IN NEURALGIA.—It is stated that the intimate mixture of equal parts of chloral hydrate and camphor will produce a clear fluid which is of the greatest value as a local application in neuralgia. Mr. Lenox Browne relates (*Brit. Med. Journ.*, March 7, 1874) that he has employed it, and induced professional friends to do so, and that in every case it afforded great, and in some instantaneous, relief. "Its success does not appear," he says, "to be at all dependent on the nerve affected, it being equally efficacious in neuralgia of the sciatica as of the trigeminus. I have found it of the greatest service in neuralgia of the larynx, and in relieving spasmodic cough of a nervous or hysterical character." It is only necessary to paint the mixture lightly over the painful part, and to allow it to dry. It never blisters, though it may occasion a tingling sensation of the skin. He has found it also an excellent application for toothache.—*Medical News*.

A NEW METHOD FOR THE TRANSFUSION OF BLOOD (*New York Medical Record*, March 30, 1874).—Dr. Joseph W. Howe believes that the essential parts of the ordinary process of transfusion are open to several grave objections. The blood, being exposed for a length of time to atmospheric influences, is liable to receive deleterious ingredients. In the process of "defibrination" a quantity of red globules, the chief nutritive and stimulating element of the blood, are necessarily entangled in the meshes of the fibrin, and are removed with it. In cases where the hemorrhage has been great, the time spent in defibrinating may be of vital importance. The wounds in the veins being comparatively large, there is more or less danger of phlebitis or thrombosis. Dr. Howe has slightly modified Dieulafoy's aspirator, and has used it for the purpose of transfusion. He employs rubber tubing about half the size of that which ordinarily belongs to the aspirator, and small needles with curved points. When ready for use the aspirator is placed in a basin of warm water, and allowed to remain there from the beginning to the termination of

the operation. A healthy adult being selected, a broad roller bandage is tied around the arm above the elbow, the fore-arm partially flexed, and the hand made to grasp tightly a round piece of wood. When the superficial veins are thus fully distended, a needle is inserted obliquely from above downwards into the median basilic vein. The operator grasps the rubber tube between the thumb and forefinger, turns the stop-cock of the aspirator, and allows the blood to rush in and fill up the cylinder. By compressing the tube occasionally, the blood will not be drawn out of the vein more quickly than it enters. A vein in the patient's arm having in the mean time been exposed, the air is expelled from the tube on the opposite side of the aspirator by forcing a little blood through it, or by sucking out the air and afterwards compressing the tube between the thumb and forefinger so as to prevent its re-entrance. The needle is then inserted into the vein, and the healthy blood thrown from the aspirator into the circulation of the exsanguinated patient.

When the vein is empty, or so small as to prevent the introduction of the needle, a canula may be employed. To do this the vein must be isolated for about an inch, and two ligatures passed around it. The ends of the lower ligature are crossed over the vein, brought down around the arm, and tied. This will prevent bleeding when the vein is opened. The wall of the vein is next pinched up with a forceps, an opening made through it, and the canula inserted; the upper ligature is tied over it to keep it in place, and the blood is then injected as before. Dr. Howe details a case in which he has recently and successfully employed this method. He claims for it the following advantages:

- "1. It takes less time than any other.
- "2. The blood is transferred without exposing it to the air.
- "3. The nutritive elements of the blood are not diminished.
- "4. As the fluid is drawn into a vacuum, there is no danger of coagula forming.
- "5. The opening in the vein being a simple needle-puncture, there is less danger of phlebitis or thrombosis."

THE ELASTIC LIGATURE (*The Lancet*, March 21, 1874).—Mr. Henry Kettle reports the case of a lady, who during four years of married life had always suffered excessive pain during coitus. For eighteen months this pain had been almost intolerable, and all sexual intercourse had ceased. She was in a depressed, emaciated, and generally miserable condition. She had been treated for some time by a distinguished specialist for vaginismus, but had never obtained any relief. Upon examination there was found growing from the posterior fourchette, more upon the left side than the right, what appeared to be an exaggerated third nymphæ, in breadth about an inch, but much broader at its free extremity; in length an inch and a half; it was exquisitely sensitive, so that even walking produced great pain. A double elastic ligature was passed through the base of the growth, and was tied on either side. In three days the whole of it had separated, leaving two small granulating spots, which were completely healed in three or four days more.

The cure was complete and permanent.

EMBOLISM AFTER THE INJECTION OF PERCHLORIDE OF IRON (*The Lancet*, March 21, 1874).—Mr. James F. West reports the case of a child, æt. 9 months, affected with a small nævoid tumor in the right ala nasi near the lip. It had existed from birth, but was slowly growing, and beginning to involve the left ala. It was soft and compressible, and over its surface large and distended capillaries were seen in three or four spots, each as large as a pea. Deformity from the prominent situa-

tion of the tumor necessitated operative interference; and as it was considered that no mode of operation offered so good an opportunity for the prevention of an ugly cicatrix as the injection of solution of perchloride of iron, it was decided to use it, and, chloroform having been given, three drops were injected by a hypodermic syringe into the lowest part of the tumor. The child struggled and cried, but there was no other unfavorable symptom. Three more drops were then injected into the upper part of the tumor, and three at another highly vascular spot, when, on withdrawing the syringe, the child's face changed suddenly to a dusky hue, the hands and feet became blue, the pulse could not be felt, and the breathing seemed to be arrested; on raising the eyelids, the eyeballs were seen to be fixed and turned upwards and outwards, and the pupils were slightly dilated. Artificial respiration was at once commenced, and in twenty minutes natural respiratory movements commenced. For the next six hours he continued semi-comatose, with a very feeble pulse, dilated pupils, livid hands and feet, and the angle of the mouth on the right side somewhat drawn down. He then became somewhat warmer, with a better pulse, and less labored breathing, but still remained unconscious. He continued in this state for three days, when he died, with well-marked symptoms of hemiplegia.

At the post-mortem examination, the membranes of the brain were found slightly congested; the anterior portion of both lobes of the cerebrum, and also the inner surface of the brain as seen in the walls of the lateral ventricles, were reduced to a soft pulp, while the posterior part of the brain-substance was in a healthy state. A clot was seen stretching from the right internal carotid artery along the middle cerebral artery of the same side. The lungs were congested. The heart contained a small quantity of dark fluid blood. The liver, kidneys, and other viscera were normal.

The embolism in this case was undoubtedly produced by the injection of the perchloride of iron, which should therefore be rejected as a remedy for nævi on the face.

SCIATICA PROMPTLY CURED BY CROTON CHLORAL HYDRATE.—Dr. R. W. Falconer, of Bath, relates (*Brit. Med. Journ.*, February 28, 1874) the following case:

"A lady, æt. 50, of rheumatic diathesis, was suddenly seized with sciatica. The pain was most severe. Two grains of croton chloral hydrate, with enough extractum anthemidis to make a pill, were given. Half an hour after taking the pill, the pain had ceased; there was a very slight return afterwards. With the beneficial effect of the croton chloral hydrate, there was 'some confusion of head, and near objects appeared distant.' She had no pain the following day until the evening; then a sharp attack occurred. Half a pill was given at once, and in twenty-five minutes the pain was gone. She had 'slight confusion of head; no alteration of vision.' There has been no recurrence of sciatica since. The first attack occurred fourteen days ago."

AQUAPUNCTURE IN THE TREATMENT OF NEURALGIA.—Dr. Siredey has employed aquapuncture for the last three years, for the relief of sciatic, intercostal, and ilio-lumbar neuralgia, and has always found it to produce considerable relief, and sometimes a cure by a single application. The process of aquapuncture consists in forcibly projecting with a particular apparatus an extremely fine jet of water upon a point of the skin. This produces at the spot a small raised blister with a minute orifice at its summit, from which flows a fluid colorless or sometimes tinged with blood. After a few hours the blister falls, and the following day a small dark scab is found in its place.—*L'Union Méd.*, March 3, 1874, from *Bull. de Thérap.*—*Medical News*.

MISCELLANY.

MEDICAL SCHOOLS AND GRADUATES.—There are in the United States, according to Dr. Toner, 101 medical teaching bodies, classified as follows: regular medicine, 77—of which 16 teach pharmacy; 8 homœopathic, 8 dental, 6 eclectic, and 2 botanic.

The annual accession to the ranks of the medical profession through American colleges is: Doctors of medicine, 1698; *ad eundem* degrees, 79; honorary, 16; and 5776 matriculants attending college. He says, if the returns were complete from all colleges, it would probably reach 2000 graduates, and perhaps 6500 in attendance on lectures.

The whole number of the medical profession of the United States numbers 62,383.—*The Cincinnati Lancet and Observer*.

MEDICAL GRADUATES IN 1874.—University of Pennsylvania, 121; Jefferson Medical College, Philadelphia, 151; College of Physicians and Surgeons, New York, 84; Bellevue Hospital Medical College, 181; College of Physicians and Surgeons, Baltimore, 26; Medical College of Ohio, 87; Medical Department of the University of Louisville, 123; Cincinnati College of Medicine and Surgery, 22; Chicago Medical College, 44; College of Physicians and Surgeons of Syracuse, N.Y., 9; Medical College of the Pacific, 12; Medical Department of the University of California, 8.—*Medical News*.

MECHANICAL CONTRACTION OF THE UTERUS.—Sir James Simpson used to mention a custom among some savage tribes, where, on the approach of labor, a stake was driven into the ground, and a long rope attached to it; the distal end of this rope was wound around the patient's body, and she herself gradually turned round so as to be brought nearer to the stake as the labor progressed, thus insuring an efficient following-up of the uterus upon the descending child, thereby preventing post-partum hemorrhage.—*British Medical Journal*.

ACCORDING to the *Baltimore Sun*, the communal council of Vienna has adopted, by a large majority, a proposal to establish in the cemetery the necessary apparatus for burning the bodies, the use of which will be optional and open to all. The council of Grätz has passed a similar resolution.

IN the séance of February 14, 1874, of the Société de Biologie of Paris, a note was read from M. Philipeaux, describing the case of two axolotls (batrachians) which had long suffered from chronic ascites, and were cured by tapping and the injection of alcohol into the peritoneal cavity.

A pow-wow doctress in Nazareth, Pennsylvania, recently undertook to bleed a lady for an epileptic fit. Unfortunately, she opened an artery instead of a vein, and the patient died before assistance could be obtained.—*Atlanta Medical and Surgical Journal*.

INCIPIENT abortion is said to have been arrested promptly by chloral hydrate.

MR. JOSEPH P. REMINGTON has been elected to the Chair of the Theory and Practice of Pharmacy in the College of Pharmacy of this city, recently rendered vacant by the death of Prof. Procter.

M. BALBIANI has been appointed to the chair of Embryology in the College of France, rendered vacant by the death of M. Coste.

ERRATUM.—In No. 127 of the *Philadelphia Medical Times*, p. 422, line 32, second column, for 15° C. read 16° C.

THE *Gazette Médicale* of March 7 contains an elaborate paper by M. Poncet on cysticercus in the eyeball.

THE American Medical Association meets this year at Detroit, Michigan, on June 2.

NOTES AND QUERIES.

MULTIPLE IMPREGNATION.

TO THE EDITOR OF THE PHILADELPHIA MEDICAL TIMES:

DEAR SIR,—The following occurrence has seemed to me worthy a place in your Notes and Queries: A black-and-tan slut in my possession was covered, a short time since, by a dog of her own species, and within two hours by a spaniel. In due course she gave birth to a litter of six pups. Four of these are pure black, with curly wool, and other marks that indicate a relationship with the spaniel. The remaining two are tan-marked, with smooth, sleek hair, and undoubtedly must acknowledge the black-and-tan dog as the author of their being.

Very respectfully,

OBSERVER.

OFFICIAL LIST

OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U.S. ARMY, FROM APRIL 7, 1874, TO APRIL 13, 1874, INCLUSIVE.

HEAD, J. F., SURGEON.—Granted leave of absence for twenty days on Surgeon's Certificate of Disability. S. O. 65, Department of Dakota, April 3, 1874.

HEGER, ANTHONY, SURGEON.—In addition to his present duties, during absence of Surgeon Head, to perform duties of Medical Director of the Department. S. O. 65, c. s., Department of Dakota.

BAILY, J. C., SURGEON.—To report in person to the Commanding General, Department of the South, for assignment. S. O. 78, A. G. O., April 10, 1874.

BROWN, HARVEY E., ASSISTANT-SURGEON.—Granted leave of absence for thirty days, with permission to apply for an extension of thirty days. S. O. 52, Department of the Gulf, April 1, 1874.

MIDDLETON, P., ASSISTANT-SURGEON.—Relieved from duty in Department of the South, and to report in person to the Commanding General, Department of Texas, for assignment. S. O. 78, c. s., A. G. O.

DEWITT, CALVIN, ASSISTANT-SURGEON.—To report in person to the Commanding General, Department of the South, for assignment. S. O. 78, c. s., A. G. O.

GIRARD, A. C., ASSISTANT-SURGEON.—Granted leave of absence for four months, on Surgeon's Certificate of Disability, with permission to go beyond sea. S. O. 79, A. G. O., April 11, 1874.

POPE, B. F., ASSISTANT-SURGEON.—Relieved from duty in the Department of the South, and to report in person to the Commanding General, Department of Texas, for assignment. S. O. 78, c. s., A. G. O.

CAMPBELL, A. B., ASSISTANT-SURGEON.—Assigned to duty at Ringgold Barracks, Texas. S. O. 54, Department of Texas, March 30, 1874.

STEINMETZ, W. R., ASSISTANT-SURGEON.—Relieved from duty in Department of Texas, to proceed to Baltimore, Maryland, and, on arrival, to report by letter to the Surgeon-General. S. O. 78, c. s., A. G. O.

HARVEY, P. F., ASSISTANT-SURGEON.—Relieved from duty in Department of Texas, to proceed to Burlington, Iowa, and, on arrival, report by letter to the Surgeon-General. S. O. 78, c. s., A. G. O.

SATURDAY, APRIL 25, 1874.

ORIGINAL LECTURES.

REPORT OF TWO CLINICAL LECTURES ON THE RELATION OF RENAL DISEASE AND HEART-DISEASE.

BY JAMES TYSON, M.D.,

One of the Visiting Physicians and Pathologist to the Philadelphia Hospital.

Reported by LOUIS STARR, M.D.

II.—KIDNEY-DISEASE TO HEART-DISEASE.

GENTLEMEN,—You will remember that at the last lecture we were engaged in considering combined cardiac and renal disease, and that your attention was then directed to the more rarely-detected form of the combined affection,—that in which the primary lesion lay in the heart. I propose then, to-day, to take up the second part of the subject, and will first bring before you a case in which disease of the kidneys has led to alteration in the heart.

The patient has been under observation for several years, and presents the following history:

Samuel —, 27 years of age, a baker by occupation, was admitted to the Philadelphia Hospital on June 2, 1871. He had always been perfectly temperate in habits, and, although a hard-working man, rarely became over-fatigued, and never exposed himself unduly to atmospheric changes. He has a healthy family history, and enjoyed remarkably good health until the spring of 1871, when he noticed that he was obliged to rise several times every night to void his urine, and that he had attacks of palpitation of the heart, and shortness of breath after exertion. Notwithstanding the continuance of these symptoms, he was able to work until June 1, 1871, when, without apparent cause, his eyelids became puffy, his legs began to swell, and he became very much prostrated. After admission the oedema extended rapidly, and in a few days involved the thighs, scrotum, and lower part of the abdomen. There is no exact information as to the presence of blood in his urine, but it is known to have been high-colored, albuminous, and diminished in quantity, the amount passed ranging from 450 to 900 cubic centimetres (15 to 30 oz.) per diem.

Under appropriate treatment he gradually improved, and on August 15, 1871, when he first came under my observation, was able to walk about the ward, all trace of oedema and ascites having disappeared. The urine at this time was normal in quantity, light-colored, had a sp. gr. of 1015, and contained an amount of albumen equal to one-third of the bulk of fluid tested, while the microscope revealed epithelial and granular casts and a few free epithelial and compound granule-cells.

From this date the improvement was continuous, and on May 15, 1872, with the exception of being easily fatigued, he had regained his usual health. The urine was again examined, and found to present the following characters: in quantity normal; color pale yellow; reaction acid; sp. gr. 1020; slight deposit of uric acid; large flocculent deposit of mucus, in which granular casts, occasional hyaline casts, and, more rarely, casts containing the nuclei of epithelial cells, were observed; amount of albumen, one-fifth of bulk tested.

An ophthalmoscopic examination was made by Dr.

C. B. Nancrede, but no alteration was discovered in the retinae.

The patient remained in this condition, being employed as nurse in the hospital, until March 27, 1873, when he began to suffer from headache, pain in the lumbar region, and a tendency to pyrexia in the evening. On testing the urine, the albumen was found to be increased to one-fourth of the bulk, and the microscope revealed numerous epithelial and hyaline casts, together with casts containing small oil-globules and a few blood-casts; some free blood-corpuscles and crystals of uric acid and oxalate of lime were also observed; the blood-corpuscles, however, were not sufficiently abundant to affect the color of the urine. These symptoms increased rapidly in severity, and on April 4 there were severe headache, intense pain in the lumbar region, oedema of the legs, frequent pulse, and augmented surface-temperature, the latter rising towards evening as high as 103° Fahr. The urine was highly albuminous, and was now plainly bloody to the naked eye; it was much reduced in quantity, 480 cubic centimetres (16 oz.) only being passed in twenty-four hours. Dry cups were applied over the kidneys, ice-bladders placed on the head, and the patient ordered, in addition, steam-baths, free purgation, and small doses of nitrate of potash and tincture of digitalis. Under this treatment the symptoms began to abate, and on April 6 Basham's mixture was substituted for the other medication. On the 7th, however, traces of erysipelas appeared about a small scalp-wound which had been received nineteen days before, and gradually spread, involving the right side of the head and face. He slowly recovered from this attack, and on April 25 was able to be out of bed, the oedema of the legs having entirely disappeared. On inspecting the urine at this date it was found to have the following characters: quantity normal, sp. gr. 1024, color light yellow, reaction acid, quantity of albumen small, scarcely sufficient to fill the concavity of the test-tube; numerous epithelial, granular, and hyaline casts were detected by the microscope.

From this time up to the present he has been employed about the hospital, and has remained in good health, except that he has had palpitation and dyspnoea after unusual exertion.

On examining the chest, slight bulging of the præcordia is observed, the area of cardiac dulness is increased, and the apex-beat, which is situated two inches below and a short distance outside of the line of the left nipple, is strong and heaving. No valvular murmur can be detected.

His general health is good; he has no calls to urinate during the night, and if it were not for the occasional attacks of palpitation and dyspnoea he would consider himself a perfectly well man. But when the urine is tested with nitric acid and heat, a precipitate of albumen, equal to one-fifth of the bulk of fluid, is thrown down, and when examined by the microscope a few granular casts can be seen. The latter conditions show that the kidneys have undergone permanent alteration, while the palpitation and dyspnoea are but too certain evidences of commencing heart-failure.

In all cases of combined renal and cardiac disease, in order that there may be a proper foundation on which to base the treatment, it is essential to determine—1, which organ is primarily affected; and 2, the exact nature of the alteration. This can only be done by careful investigation of the clinical

history of each case as it presents itself; and although it is easy to solve the first portion of the problem, it is sometimes difficult, especially when the disease has originated in the kidneys, to discover the extent and character of the structural change.

The form of kidney-disease which most usually gives rise to secondary heart-lesion is chronic contraction, or cirrhosis. In this condition the whole of the kidney is wasted, but the cortical or secreting portion most markedly so. The organ is small, hard, and pale, the capsule adherent, and the Malpighian bodies smaller and less numerous than in health, while the small arteries are more prominent, due to thickening of their walls. When a section of the cortical portion is examined microscopically, the renal tubules are observed to be shrunken and devoid of epithelium, and the interstitial fibrous tissue situated between them is increased. The amount of this fibrous tissue is small in the normal kidney, and its increase, according to Johnson and Beale, depends upon rapid destruction of the tubular structure, and not upon inflammatory proliferation of the stroma itself, as stated by Virchow and others. The former authors also maintain that the so-called stroma does not exist in the young kidney, but that it is developed as portions of the secreting structure become useless and are converted into fibrous intertubular substance. That the elements of connective tissue are present in the normal kidney, I can attest from the constant presence of connective-tissue corpuscles which I have met in many examinations; but that this tissue is present in minimum amount, so that it contributes in no way to the bulk or to the formation of a so-called stroma for the organ, I am equally certain. It appears to me, therefore, that we must admit the possibility of an inflammatory increase of these elements, as we admit and often see their increase in interstitial inflammations of the lung where connective tissue is primarily present in small quantity, though more abundant than in the kidney. But while admitting this as one of the modes of origin of the increased amount of fibrillated tissue between the tubes in the contracted kidney, I also believe, with Johnson and Beale, that the atrophy of the tubules and the destruction of their cellular contents contribute as well to the increase.

Before proceeding to explain the manner in which such changes produce alteration in the heart, it will be well to consider briefly the peculiarities of the renal circulation as accurately determined by Virchow. After entering the kidney the renal artery divides into three sets of branches, of which one set, belonging to the middle and outer portion of the cortical substance, goes exclusively to form the *afferent* vessels, which, entering the Malpighian capsules, divide to form the capillaries of the glomeruli; these reunite to leave the Malpighian capsule as *efferent* vessels, after which they again break up into capillaries once more to reunite as renal veins. At the boundary between the cortical and pyramidal portions there is a sort of neutral ground on which there are arteries from which branches arise, some passing through the course described, except that the efferent vessels,

instead of becoming a second time capillary, send off long offshoots (*vasa recta*) down into the cortical and medullary substances, and others which act directly as nutrient vessels for the medullary substance. Finally, there is a third set of branches of the renal artery which do not go to form glomeruli at all, but whose function is simply the nutrition of the medullary substance.

The water is filtered out in the glomeruli by simple blood-pressure or *vis a tergo*, in connection with the resistance which the blood meets in the glomeruli and narrow efferent vessels. Even under normal conditions this pressure is considerable, the renal artery being short and of disproportionately large calibre. The water thus eliminated passes down the tubuli uriniferi, and in filtering from cell to cell becomes charged with the solids of the urine which are removed by the cells in the convoluted tubules from the thickened blood in the second capillary network,—partly (inorganic principles) by simple osmosis, and partly (organic constituents) by a real act of secretion. Any increase in this pressure would be followed by an increase in the bulk of fluid removed: thus, if the abdominal aorta were tied below the origin of the renal arteries, the arterial tension would be increased and the amount of water greatly augmented, but there would be no albumen or casts. If, on the contrary, a ligature were placed around one of the renal veins, the venous side of the renal circulation would become turgid, while the engorgement could not extend through the narrow efferent vessels into the glomeruli, and there would be *no* increase in arterial tension. Under these circumstances the bulk of the urine is diminished, and it is found to contain albumen and casts. Now, it is plain that increased tension from arteriole spasm, and venous congestion from heart-failure, differ merely in degree from ligature of the aorta on the one hand, and ligature of a renal vein on the other.

In cirrhosis, a certain portion of each kidney is destroyed for all functional purposes, the balance between the products of metamorphosis and the power of elimination is disturbed, and the blood becomes poisoned. This condition of the blood, as first suggested by Ludwig, Traube, and others and confirmed by Johnson, produces spasm of the arterioles not only in the kidneys, but also in the tissues generally, the effort being, as it were, to cut off the access of impure blood. So far as it goes, this spasm is conservative, as it prevents further tissue-waste until the blood is purified and relaxation takes place; but, when frequently repeated, as its natural result there occurs hypertrophy of the muscular walls of the arteriole. But this constant obstruction to the circulation incites increased action on the part of the heart to overcome it, and soon leads to hypertrophy of the left ventricle. The whole arterial system is now subjected to a great strain, between the hypertrophied heart at one extremity and the contracted arterioles at the other, the two reacting upon each other. In the course of time slow inflammatory action is set up in the tunica intima, which, later, extends to the outer coats, and they become atheromatous, weakened, and

liable to dilatation. This condition once induced, if there should be from any cause suddenly increased pressure there is danger of rupture of the brittle arterial walls; and it is for this reason that such cases are often terminated by apoplexy. When this does not take place, the heart gradually undergoes fatty degeneration and subsequent dilatation, and the patient may die either from cardiac failure, or, if the lesion of the kidneys has advanced more rapidly, from uræmic poisoning.

Although all the changes which occur during the progress of the disease are in a measure conservative, allowing temporary approximation to a state of health, and enabling the system to support more easily the intercurrent affections arising through an impoverished blood, they nevertheless gradually impair the integrity of both organs, until they reach a point where life is no longer possible.

Fatty and amyloid degeneration, or indeed any affection of the kidneys, if of sufficient duration, may give rise to hypertrophy or dilatation of the heart, but less frequently than cirrhosis of the kidney, and to a less extent.

Besides the symptoms already mentioned in detailing the clinical history of the case before you, there are a number of others connected with inflammation of the stomach, intestines, and bronchi, which often occur during the course of the disease, and which are in themselves characteristic of it. The chief of these are vomiting, diarrhœa, and obstinate "winter-cough." Such events must also be regarded as in a measure conservative, for in nearly every instance they are the means of eliminating from the blood those waste products which can no longer be carried off by the proper emunctories. The same may be said of the skin-eruptions, and of the deposits of the uric-acid salts about the joints of the fingers and toes, both of which are often complications of combined heart- and kidney-disease. The various organs are, therefore, converted for the time being into supplemental kidneys.

Ophthalmoscopic examination alone is at times sufficient to justify a positive diagnosis as to the existence of renal disease. The appearances usually observed are white stellate spots on the retina, a swollen condition of the retinal vessels, and, in some cases, a form of uræmic cataract.

In conclusion, I desire to show you a set of specimens which strikingly illustrate the foregoing remarks, consisting of the *hypertrophied heart* and *two contracted kidneys*. They were derived from—

D. H., æt. 63, a native of Ireland, who entered the house on the 28th of January, 1874, completely unconscious. He is said to have been feeling badly for some days, in the out-wards or almshouse department, but tried to conceal his condition to avoid coming to the hospital. He was suddenly seized with convulsions on the morning of the 28th, and was brought to the wards at half-past 10 o'clock A.M.

When Dr. Guiteras, the resident physician, saw him, his respirations were 28 a minute, deep, and the regularity of their rhythm was only interrupted every five or eight minutes by convulsions which began with twitchings of the left side of the face, and extended all over the left side of the body, shaking the bed under him, and at times also involving the right lower extremity. The

respirations during the fit became jerking, his face purplish, and he foamed at the mouth. There was no œdema, no effusion into chest or abdomen. A full inspiratory murmur was heard over anterior of lungs. The pupils were normal, and responded to changes of light. He could not swallow. *His urine was examined, and found to contain about one-half of its bulk of albumen.* He then received a hypodermic injection of one-fourth of a grain of morphine, a few minutes after which he had his last convulsion. After this his coma continued. His bowels could not be opened by croton oil. Two more hypodermic injections of one-fourth of a grain of morphine were given, with the apparent effect of slowing his respirations down to 18 a minute, but they continued stertorous. His pulse, which before the first hypodermic had been frequent and not weak, became very hard and bounding, coming down from above 110 a minute to 100. At midnight tracheal râles began to be heard, and between 7 and 8 o'clock A.M. of the 29th he died, without any other change in his symptoms.

The urine for examination was drawn with a catheter. Not more than four fluidounces were found in the bladder. No more urine was passed, because the bladder was found empty on post-mortem examination.

No microscopic examination of the urine was made.

I need hardly say that the symptoms for twenty-four hours before death were those of uræmia, a frequent cause of death in this most insidious form of renal disease,—contracted kidney.

But let us study the specimens before us. The kidneys are very small, not more than half as large as in health. They contain each fifteen to twenty superficial cysts, from a line to three lines in diameter, filled with transparent fluid, and each kidney contained one larger cyst which held a fluidrachm of the same fluid. Further, the cortical or convoluted portion of the organ is greatly diminished in area.

Now, these are the grosser characters of the cirrhotic kidney. But I also examined the organs microscopically, with a view particularly to studying the condition of the arterioles. I had no difficulty in demonstrating the condition referred to. The walls of the arterioles, which are brought out with great distinctness by means of acetic acid, are seen to be twice and even three times as thick as in health, exhibiting quite the relative difference shown in the drawing on the board from Dr. Johnson's little book, of which the original was made from actual specimens. I have no time in this lecture to explain, or even describe, the other minute changes in the kidney, but will leave that to lectures more directly bearing upon the different forms of Bright's disease. Our present object is more particularly to illustrate the relation between the heart-affection and kidney-affection. There is one other appearance, however, to which I cannot refrain from alluding; and that is the appearance of concentric layers of connective tissue about the Malpighian bodies, which is here peculiarly distinct: so distinct and abundant is the fibrillation, so large and well-defined are the spindle-shaped connective-tissue corpuscles, that I cannot but think it affords evidence of the activity of the elements of connective tissue already referred to as sparsely present in the kidney, in the adventitia of the blood-vessels, if nowhere else, and which must be admitted as one of the sources

of the increased amount of fibrillated tissue present in this form of renal disease, but not the exclusive one.

Of equal interest in this connection is the condition of the heart. We may truthfully say it is enormously thickened. It weighs twenty ounces,* and the muscular walls of the left ventricle are twice as thick as they usually are in a healthy organ, while the valves are practically normal. There may be a slight degree of thickening of the mitral leaflets, but the valve is physiologically sufficient, and the condition resolves itself into one of pure hypertrophy of the left ventricle, which we believe to be due to the extraordinary efforts of the heart to overcome the resistance presented by the renal and general systemic arterioles through their hypertrophied muscular coat.

ORIGINAL COMMUNICATIONS.

ATOMIZATION OF BELLADONNA IN THE TREATMENT OF WHOOPING-COUGH.

BY JOHN R. HAYNES, M.D.

DURING the wide-spread epidemic of pertussis which occurred in the winter of 1872-3, my brother, Dr. Francis L. Haynes, intrusted to my care most of his cases of that disease, with the proviso that I should use belladonna by the atomizer, in treating them.

I recorded the cases treated in this manner, and they seem of sufficient interest to merit publication.

Case I.—Lizzie M., aged twenty-eight months; coughing began October 7, 1872, and on the 12th slight whooping was noticed. The whooping increased in severity, and the paroxysms became more and more frequent until treatment was commenced (Oct. 24), when they occurred at intervals of half an hour; moist râles were heard over the entire chest. The violence of the paroxysms was shown by the presence of spots of effused blood under the left conjunctiva.

The treatment consisted in the administration of one ounce of the following mixture by the steam atomizer:

℞ Ext. belladon., ʒiiss;
Ammon. bromid., gr. lxxx;
Potassii bromid., gr. xl;
Aq. dest., fʒiv.—M.

This process was repeated nearly every day until Nov. 5, making ten atomizations in all.

The following schedule shows the rapidity with which the patient improved.

Date.	No. of paroxysms in 24 hours.		Remarks.
October	24	40	Atomization commenced.
"	25	20	Atomization.
"	26	7	"
"	27	5	Atomization omitted.
"	28	6	"
"	29	5	Atomization.
"	30	6	"
"	31	4	"
November	1	4	Atomization; no whooping.
"	2	3	"
"	3	3	"
"	4	3	"

* Normal weight, ten ounces.

As may be observed, after the sixth atomization the whooping ceased, though rare paroxysms of coughing still occurred. There was no return of the whooping, and the coughing became less and less harassing, and after two weeks more ceased entirely.

Case II.—Benjamin L., aged twelve weeks; coughing commenced September 20, 1872; on the 27th whooping was noticed. Treatment was commenced on October 14. At that time, the child, though previously healthy, was emaciated and anæmic; numerous moist râles were heard over the chest, and the abundant secretion interfered so much with respiration as to cause serious alarm. Several convulsions had occurred since the onset of the disease. The paroxysms occurred at intervals of about one hour, and were very violent and long-continued.

At first but two drachms of the above-mentioned mixture were used; on the 16th the quantity was increased to half an ounce, and on the 17th to an ounce. Eight atomizations were used in all.

Date.	No. of paroxysms in 24 hours.		Remarks.
October 14	24		Atomization.
" 15	16		"
" 17	12		"
" 18	12		Atomization; no whooping.
" 20	10		"
" 21	8		"
" 23	5		"
" 26	3		"

During the treatment the child's general health improved immensely; when it was discontinued a slight cough was left, which lasted for about a fortnight longer.

In this case it is believed that timely treatment saved the child's life.

Case III.—Laura S., aged fifteen months, came under my charge February 20, 1873, having had whooping-cough for twelve weeks. During the last four weeks the cough has been very severe, and is not improving in the least.

A simple solution of ext. belladonna, of the strength of seven grains to the ounce, which was rapidly increased to fifteen grains, was administered.

Date.	No. of paroxysms in 24 hours.		Remarks.
February 20	44		Atomization.
" 21	30		"
" 28	8		"
March 1	5		"
" 4	10		"
" 6	7		Atomization; no whooping.

The subsequent history of this case was the same as that of Case II.

Remarks.—I have preserved the notes of eight additional cases treated in the same manner. Belladonna alone was used in all the cases except two, for it soon became apparent that this was the only efficient ingredient of the mixture at first employed. The strength of the solution varied from four to twenty-three grains to the ounce of water, which was the quantity generally used.

The satisfactory results related above were obtained in all the cases except one, in which no benefit whatever resulted, the disease pursuing its natural course. In one case treatment was commenced on the day after whooping became apparent, and with the effect of entirely preventing its return, although some paroxysmal cough remained for a month. Indeed, it was discovered that after

the spasmodic element of the disease had been eliminated it was useless to prolong the treatment, for the inhalations of belladonna had no influence on the subsequent cough. This, however, was of little moment, since after the whoop had disappeared the patient experienced but very slight annoyance from the remaining symptoms.

In nearly every instance atomization was followed by the appearance of the constitutional effects of belladonna,—dilatation of the pupils, dryness of the throat, and redness of the skin; slight delirium sometimes occurred. In one case where an unusually large quantity of the mixture was employed, the patient—a girl aged seven years—continued delirious for eight hours. If some of these effects did not follow the inhalation, it produced little or no benefit.

Almost always the inhalations would be followed by sleep, but exceptionally prolonged wakefulness would result. Thus, one anxious mother begged me to visit her child in the evenings, since it always slept so well after being “steamed,” while another complained that if I came in the evening the baby remained awake all night.

To compare the effects of belladonna when administered by inhalation and by the stomach, I treated two cases by the latter method.

Case I.—November 28, 1872; Mary A., aged 4 years, has coughed for two weeks and whooped for last five days; at present she has about twenty-four paroxysms daily. Ordered ten drops tinct. belladonna four times a day.

December 1.—No improvement. Ordered fifteen drops four times daily, and twenty drops at night.

December 2.—Slight reddening of skin and dilatation of pupils followed each dose yesterday. The last dose produced mild delirium, which lasted all night. Whooped twelve times during last twenty-four hours. Continue taking fifteen drops four times a day.

December 3.—Whooped four times during last twenty-four hours. Slight delirium for half an hour last night, after which she slept well.

She sleeps for one or two hours after every dose. Increased dose to twenty drops four times a day.

December 6.—The belladonna keeps pupils widely dilated, and causes drowsiness after each dose. Whoops four times a day. Treatment discontinued. In three weeks the patient had entirely recovered.

Case II.—January 3, 1873.—Sarah H., aged sixteen months, has had whooping-cough for four weeks. At present about thirty paroxysms occur daily. Ordered eight drops tinct. belladonna four times daily.

January 4.—Each dose produces momentary delirium, dilatation of pupils, and intense reddening of skin. Sixteen paroxysms occurred during the last twenty-four hours. Continue treatment.

January 5.—Ten paroxysms during the last twenty-four hours. I then lost sight of the patient.

In conclusion, it seems that belladonna by the stomach does not influence whooping-cough so decidedly as when given by inhalation. But it is probable that the former method of administration will generally be preferred, on account of its greater convenience.

By either method belladonna is useless unless a sufficient quantity is given to produce some of its constitutional effects.

ANASARCA—REPORT OF THREE CASES.

BY H. E. WOODBURY, M.D.

IN the month of October, 1872, I was called to Miss L. R., æt. 14. Her condition was as follows: pulse 78, and tolerably strong; tongue covered with a soft whitish coat; great dyspnoea, and much pain in the region of the heart; decubitus on the right side; could not lie in any other position; circumference around the abdomen $37\frac{1}{2}$ inches; extremities œdematous, and increased one-half in size by the effusion; eyelids puffy and transparent; complexion exceedingly sallow; bowels torpid; urine scanty; in short, all the symptoms indicated a well-marked case of anasarca.

From her stepmother I gleaned the following history. About two or three months previous to my visit, she had an attack of bilious fever. Up to that time her health had been good. The chills were very persistent, but finally yielded to quinine and arsenic, which had been given in heroic doses. Soon after they were controlled, the anasarca began to appear. Three physicians had expressed the opinion that the case was a hopeless one, before I was called. Having faith in the efficacy of certain remedies, I was hopeful, but not over-sanguine as to my prognosis of the case.

My first proceeding was to examine the urine carefully. Finding neither albumen nor sugar, I concluded that the anasarca resulted from nephritis, the latter having been superinduced by the continued use of the arsenical preparations. As the anasarca produced by arsenic generally subsides when the use of the drug is suspended, and as my patient had not taken it for weeks, I could not comprehend why the effusion had not diminished. On the contrary, it had been constantly increasing, until the poor girl had become so miserable that she longed to find in death a messenger that should bring her final relief from her suffering.

Treatment.—There was a never-failing spring of clear water near the patient's home. She was directed to drink three or four pints or even more of this water every twenty-four hours, if possible. Her limbs and body were bandaged, as much pressure being made as she could comfortably bear. The following recipes were ordered:

R Elaterin. (Clutterbuck's), gr. i;
Pulv. aloes, gr. v;
Podophyllin., gr. ij;
Rosæ conserv., q. s.

M. et ft. pil. no. x.

Sig.—One pill, morning, noon, and night.

R Vin. colchici, fʒi;
Tinct. digitalis, fʒiij;
Potass. iodid., ʒi;
Syr. sarsap., fʒi;
Aq. puræ, fʒiss.

M.

Sig.—A small teaspoonful three times a day.

Result of Treatment.—During the first twenty-four hours there was an increase of the urinary secretion, and she had evacuations of a scybalous character. The next day the amount of urine and fecal matter passed was almost incredible. On the morning of the third day the tape showed a diminution in the circumference of the abdomen of more than three inches. She could lie on her back, and her dyspnoea and cardiac pain had disappeared. She expressed herself as follows: “I feel like a new person; I shall get well.” By the fifth day, on account of the rapid disappearance of the fluid, the bandages had to be tightened several times in twenty-four hours, and the doses were gradually diminished in quantity, or given less frequently. About the twelfth day the circumference of the abdo-

men was 25½ inches, and the patient, although very anæmic and greatly debilitated, was able to sit propped up in bed during a portion of the day.

Tinct. ferri chlor. was ordered, and she took it for about two weeks. Her recovery was complete, and she has experienced no return of the disease.

Case II.—Mrs. V., æt. about 45; married; full habit; weight about 170 pounds; called on me for professional advice, four years ago. She was suffering from endocervicitis. This yielded promptly to treatment, and a short time after she came to consult me relative to her condition, believing herself to be pregnant on account of the great increase in her size. She appeared like a woman in the sixth month of pregnancy, but could not be sure that she had ever felt any movements of the fœtus. Her lower extremities were swollen and œdematous to such an extent that she was obliged to send to New York for hose, being unable to procure any large enough here, and she could not wear the shoes she had been accustomed to wear.

Upon questioning her, I learned that some members of her family had died of dropsy,—a disease she greatly feared. She had suffered from habitual constipation. At times the urine was scanty. She complained of a pain in her back, headache, and depression of spirits. Pulse, 80; tongue somewhat coated; heart-sounds normal; temperament bilious. She suffered most from the distention in the evening. I desired to examine her urine; she declined to have this done, saying, "It was examined some years since, and found all right."

Treatment, and its results.—Bandages were applied to the limbs and abdomen. The patient was directed to drink freely of the purest water. The same recipes were ordered as in Case I., with this exception,—the elaterin was increased to gr. jss in recipe No. 1. In a very few days there was a marked improvement, and in two weeks from my first visit my ministrations ceased. Mrs. V., by following the directions I gave her, had no return of the disease for two years. A slight attack about two years ago, when she was on a visit at the North (the result probably of some imprudence on her part), yielded promptly to treatment. A few weeks ago (Jan. 20) she called on me, and expressed the opinion that her dropsy was returning. Her abdomen was much enlarged, her limbs œdematous, and her general appearance confirmed the suspicion that such was the case. The same course of treatment was commenced as on the former occasion, and at the present writing (Feb. 12) the lady is in the enjoyment of her usual health, only experiencing the inconvenience of a very slight swelling of the feet whenever she has stood or walked much during the day. I do not consider her exempt from relapses of the disease in the future, but believe that by the use of elastic stockings, and a careful regulation of the secretions, she may succeed in keeping herself comfortable for many years to come.

Case III.—Mrs. J., æt. about 60, sent for me February 16, 1874. She was suffering from excessive dyspnoea, and feared that she would "die of suffocation." Her pulse was 90, weak, and intermittent; tongue coated; abdomen greatly enlarged. Had suffered from fever, insomnia, anorexia, and constipation.

Auscultation revealed valvular (mitral) disease of the heart. She informed me that her heart had been affected for many years; of late the symptoms had become more aggravated. In her case the swelling was principally confined to the abdomen (ascites), pleural cavities (hydrothorax), and left arm and hand. For months she had been unable to take her accustomed exercise, on account of the discomfort any exertion caused.

Prognosis unfavorable.

Treatment.—The medicine ordered for this patient was the same as in Case I.; the doses at first being smaller, on account of her age. As no unpleasant results followed their administration, they were gradually increased, and carefully watched until their full effects were obtained. Pressure by bandages applied around the body. Pure water ordered to be taken freely.

Results of Treatment.—February 17. Patient passed urine more freely during the night, and her breathing is somewhat improved. Pulse 84, and stronger.

February 18.—Since my last visit she has had copious evacuations, and passed urine very freely. Says she is "a great deal better." Pulse 80, and more regular.

February 19.—Action of the medicine has been kept up. Abdomen is much diminished in size. Her breathing is painless and natural. Pulse 80. Suspend the pills; take the diuretic mixture morning and night.

February 20.—Omitted my visit to-day.

February 21.—Found her somewhat nauseated to-day, probably from taking oysters that were not fresh. Stopped the diuretic, and ordered cod-liver oil, ʒss three times a day.

February 23.—Patient is up a portion of each day, and feels very comfortable. Still wears the bandage, and takes a pill or a teaspoonful of the diuretic occasionally as her condition requires. Her appetite is improved, and she is gaining strength.

March 5.—Called on Mrs. J. to-day. She was engaged in writing when I entered, and looked as hearty and well as before her illness. She informed me that when she sent for me she never expected to feel so well as at present. In cases like hers, where the disease results from an organic derangement of the heart,—a condition we are unable to remove,—it is very satisfactory to be able to afford our patient such marked—even though it may prove but temporary—relief from suffering.

Our purpose in reporting these cases is to call the attention of the profession to two points in the treatment, the value of which we believe to have been greatly underrated in such cases,—viz., the value of pure water as a diuretic, and the value of pressure as a mechanical means for preventing infiltration of the tissues. We have used these in many other instances, and with results that have fully justified us in arriving at the conclusion that they should never be overlooked in the treatment of a case of ascites or anasarca.

WASHINGTON, D.C., March 7, 1874.

SEPTIC SYMPTOMS PRODUCED BY DECAYING SAUSAGE.

BY DR. J. BERENS.

THE following case is of such character as to seem worthy of a brief record:

Upon being called to see a female patient, æt. 30, and affected with nymphomania, I found her in bed with fever, prostration, and other well-marked symptoms of septicæmia, for which no apparent cause could be assigned. Close questioning, however, revealed the fact that, to satisfy her cravings, she had resorted to a piece of Bologna sausage, a part of which had broken off and remained within the cavity of the vagina. Putrefaction had evidently set in, followed by the result indicated above. All doubt was dispelled by the production of a vessel containing the offending piece, which had been discharged an hour previous. Although much disorganized, it retained sufficient semblance of its former self to render recognition certain.

Under the use of disinfectant vaginal washes, the woman soon recovered.

THE EUCALYPTUS.

BY A. L. FLINT, M.D., U.S.A.

DURING the past few years the *Eucalyptus globulus*, an Australian gum tree, has been successfully acclimated in Algeria, Southern France, Egypt, Cuba, and California. It is a fine-looking, fragrant evergreen, and belongs to the myrtle family. Its leaves are opposite, nearly sessile, ovate-lanceolate, faintly bluish underneath, and the trunk and branches of the young trees are similarly tinged: hence the common name, blue gum. It grows rapidly, and in its native country attains a gigantic size, rivalling the "big trees" of California. M. Gimbert, who has read a paper on the *Eucalyptus* to the French Academy of Sciences, says, "It absorbs ten times its weight of water from the soil, destroys miasmatic influence, and has the property of emitting antiseptic, camphorous effluvia."

The London *Medical Times and Gazette*, commenting on M. Gimbert's paper, remarks:

"We have no information as to whether this beneficent tree will grow in other than hot climates. We hope experiments will be made to determine this point."

Mr. V. F. B. Stanford, of Pix-house, Tinsbury, England, had already determined the matter, and wrote to that paper, Nov. 22, 1873, the following communication:

"As I have successfully reared from seeds two dozen of these trees, and as they are now growing well out-of-doors, I think some of your readers would like to know how I succeeded. I obtained the seed five years ago from South Australia, and forced it in a hot-house. In one year it was four feet high, and now, in its fifth year, it is growing rapidly in a sheltered position in the park, having attained a height of thirty feet. The first three years the tree must be taken under cover every winter, and the fourth and fifth year should be protected for several feet up with wisps of hay or straw. In-doors it should be kept in an orangery or very high greenhouse, with plenty of light and little water (?). I have sent specimens of my five-years-old tree to Milton Abbey, Dorsetshire, and to Donhead Rectory, Wilts, where, I believe, they also flourish."

The lowest temperature during the past two years in eighteen of the principal towns of England was 16°, at Sheffield. The gum trees, therefore, would no doubt do well, with a little care, on the east side of our Appalachian range, in about latitude 33°, where the magnolia is native, and, of course, at any point farther south. In California they grow quite into the foot-hills of the Sierras, where snow often falls.

The seeds of the blue gum are very small and black, somewhat resembling onion-seeds. The writer bought some two years ago while in San Francisco, and in April of last year planted them in boxes. In ten days several of the sprouts were up, and, in all, forty-five plants appeared. They thrived for a time, but absence caused them to be neglected. The San Francisco florists have eight or more species of *Eucalyptus*. The *Eucalyptus giganteus* (stringy-bark gum) is said to be a fine tree. *Eucalyptus paludosus* (swamp-gum) is planted in wet soils.

If any of the readers of the *Times*, particularly Southern medical men, wish to try, on a small scale, the experiment of raising these trees, they can easily do so at a nominal expense, say fifty or sixty cents only, for a package of seed. Mr. E. E. Moore, 425 Washington Street, San Francisco, or any other florist in that city, has the Australian seed. Eastern seedsmen may also have it.

FORT McPHERSON, NEBRASKA, March 20, 1874.

NOTES OF HOSPITAL PRACTICE.

PHILADELPHIA HOSPITAL.

SERVICE OF DR. H. C. WOOD, JR.

Reported by JOSEPH A. MCCAULEY, M.D., Resident Physician.

CASE OF CEREBRAL SARCOMA WITHOUT AFFECTION OF THE OPTIC DISK.

R. T., 50 years of age, female, born in New Jersey, was admitted into the medical wards from the out-wards January 30, 1874, for chronic rheumatism in the right shoulder and knee. She also complained of constant and severe pain in the head.

About one month after her admission, the following phenomena were first noticed. She would get up out of her bed, catching hold of everything, and upsetting them, seemingly unconscious of her movements. Directly after this she would invariably fall backwards upon the floor, lying on her back, foaming at the mouth, and unconscious, and offering all the phenomena of a fit of epilepsy.

When these would pass off, and she was questioned how she felt, she said she did not know what she was doing, that she had no consciousness of having got out of bed, and that before the attack she had an irresistible feeling as if she were all the time going backwards.

She had three of these well-marked attacks, but frequently had slight paroxysms with the same premonitory feelings, and loss of consciousness. She was at first put on large doses of iodide of potassium, and afterwards on bromide. Sometimes she would feel markedly relieved, and we would have hopes of her improvement, and then suddenly she would relapse. She also would sometimes be attacked with persistent vomiting, which, however, yielded to treatment. On Sunday, the day before she died, a careful examination by Profs. William Norris and H. C. Wood revealed that the optic disks were normal.

The day she died I was in the ward about ten or fifteen minutes before her death, when she was seemingly very comfortable. I went into the office to write some orders, when the assistant-nurse came and reported her as having one of those epileptic attacks. I immediately went down to the ward, but found her dead. There was at no time any paralysis present in this case.

At the post-mortem examination there was found a tumor, rather elongated in shape, one and a half inches long and one inch in diameter, attached by a pedicle to the cerebrum, resting in the olfactory groove, involving the pia mater and arachnoid, destroying the olfactory nerve, and softening the brain-substance around, but not disintegrating it much.

It was of pale pink color, rather irregular, formed of many small lobules, which were joined together into larger lobules by trabeculae of connective tissue, resembling much a salivary gland; consistence firm.

The cerebellum was found slightly congested and very much softened.

On microscopic examination of a section of the tumor, it was found to be a sarcoma, with spindle-shaped cells. The other organs of the body were healthy, with the exception of the liver and kidneys, which were congested.

TRANSLATIONS.

POISONING BY NITRO-BENZINE.—M. Limasset reports the following case in *L'Union Médicale*, February 7, 1874:

A man who had been suffering for some time from scabies was ordered a liniment containing nitro-benzine. Applying this in the evening, he retired, and awoke the following morning suffering from a slight headache. Finding it increasing, and being somewhat drowsy, he lay down and slept, but soon awoke with numbness of the fingers, ringing in the head, and vertigo. Attempting to walk, his movements were uncertain; he became more languid, and finally could not walk without assistance. At this time M. Limasset first saw him, and found him livid and cyanosed, his hands cold, finger-nails discolored, and head flexed upon his neck. He vomited, frequently, matters of a vinous red color. His person exhaled a strong odor of bitter almonds. The heart-sounds were healthy, saving a slight exaggeration of the bruit. The tongue, gums, and walls of the mouth and pharynx were all colored blue. The intellect continued unimpaired.

Fresh air was immediately admitted to the apartment, an emetic administered, and aromatic vinegar applied to the nostrils. Under the influence of these remedies the more threatening symptoms gradually disappeared. The breath and sputa remained odorless of bitter almonds, while the urine was pale, and quite free from smell.

Blood drawn forty-eight hours later had no abnormal odor; it was at first dark, but soon changed to vermilion red.

A week later the patient was quite well, save that a slight blue tint remained, and the sputa still gave out a faint odor of bitter almonds. In this case Dr. Limasset concludes that the nitro-benzine, whether or not it was changed into aniline in the blood, acted as a poison. In another case cited by him, when this substance was taken into the stomach the result was fatal. A. V. H.

RHEUMATISM IN CHILDREN.—M. Constant Picot has been at some pains to work up a subject which does not seem to have received hitherto the attention at the hands of writers on the diseases of children which its importance deserves. His observations, made chiefly at the Hospital for Sick Children in Paris, are published in a brochure (*Du Rhumatisme Aigu, et de ses diverses Manifestations chez les Enfants*), and seem to sustain facts which, though not in any way new, have not before appeared in a systematic and connected way. The book is very interesting, and, so far as is possible with its class, satisfactory; but we never finish reading a work on any branch of clinical medicine without a feeling of sympathy with the author, and thinking of the remark made by an old and wise man: "The human body is so wonderful that I fear you doctors will never really know much about it."

Some of the principal points of the work are summed up in a chapter of conclusions as follows:

1. Rheumatism is a somewhat common affection among children from the age of seven or eight years and upwards: it is very rare under five years.

2. The symptoms of articular rheumatism are in children generally less intense, and their duration is shorter, than among adults.

3. The cardiac complications of rheumatism are very frequent in children: indeed, they are almost the rule, and may occur even in subacute cases.

4. Rheumatic cardiac affections in children sometimes disappear without leaving a trace, but they may in other cases terminate in an organic affection of the heart which is rapidly fatal.

5. Pleurisy is not infrequent as a result of rheumatic pericarditis; it occupies the left side, but may become double.

6. Cerebral rheumatism occurs among children: it is frequently attended by clonic convulsions.

7. Chorea is often a manifestation of rheumatism; it follows, accompanies, or more rarely precedes the articular pains.

8. Rheumatic chorea very often but not always attends heart-trouble. Chorea and disease of the heart may be present at the same time in a child who has never manifested pains in the joints.

9. The most satisfactory theory of rheumatic chorea is that the disorders of motility are the result of the rheumatic action upon the nervous centres, and more particularly upon the cord and its coverings.

10. Muscular rheumatism is rare in childhood. Torticollis is often produced by a cervical arthritis.

11. *Rheumatism* in children is very often under hereditary influences.

12. That form called scarlatinal rheumatism is an affection analogous to ordinary rheumatism. Scarlatina is only the occasional cause of rheumatism.

13. Endocarditis recurring in scarlatinal rheumatism usually disappears without leaving permanent heart-lesions.

14. If we compare in a general way the acute rheumatism of childhood with that of adult life, we find that, whilst in young subjects it displays a lower degree of intensity, it has on the other hand a greater tendency to leave the articulations and invade internal organs. Visceral manifestations in rheumatism are more frequent among the young than among adults.

J. C. W.

RESULT OF THE UNION OF MOTOR AND SENSORY NERVE-FIBRES.—M. Vulpian has made a series of experiments in uniting the peripheral end of a motor nerve (the hypoglossal) with the central end of a sensory (the lingual).

Complete union having been obtained, after a certain lapse of time the course of the lingual was laid bare, severed from its central connections, and irritated by electricity, etc. No movements of the tongue were produced, save in a single case, when incomplete isolation was suspected.

M. Vulpian concludes that either the greater number of the regenerated fibres on the peripheral side of the hypoglossal nerve do not immediately take on their normal relations with the primitive muscular fasciculi of the tongue, or else that these regenerated fibres are essentially but prolongations of the fibres belonging to the central end of the lingual nerve, and, like those, possess no aptitude for causing contraction of the lingual muscles. He considers the result of his experiments to be a decided refutation of the opinion of those physiologists who believe that sensory, motor, and sympathetic nerve-fibres possess one common property, —neurility; a property which, roused into activity, gives rise to different effects according to the central or peripheral connections of the nerve-fibres in which it comes into play.—*Gaz. Méd. de Paris*, Feb. 14, 1874.

A. V. H.

PHILADELPHIA
MEDICAL TIMES.
 A WEEKLY JOURNAL OF
 MEDICAL AND SURGICAL SCIENCE.

The Philadelphia Medical Times is an independent journal, devoted to no ends or interests whatever but those common to all who cultivate the science of medicine. Its columns are open to all those who wish to express their views on any subject coming within its legitimate sphere.

We invite contributions, reports of cases, notes and queries, medical news, and whatever may tend to increase the value of our pages.

All communications must bear the name of the sender (whether the name is to be published or not), and should be addressed to Editor Philadelphia Medical Times, care of the Publishers.

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SATURDAY, APRIL 25, 1874.

EDITORIAL.

CREMATION.

AS our readers know, the proposition so actively supported, if not originated, by Sir Henry Thompson has given rise to a great deal of discussion, and it seems as though the ceremony of burning the dead might actually be introduced among us,—if, indeed, its friends do not kill it by their absurd methods of advocacy. The only question, it seems to us, is one of convenience and hygiene: the putting forward of economical reasons, as is done, belittles and makes ridiculous the whole subject. New York has now its cremation society, led by the immortal Bergh, and some of the speeches made at its organization offer fine illustrations of that method of advocacy which, even in the hands of Sir Henry Thompson, has proven so destructive to the project. Mr. E. B. Schnabel said, *inter alia*:

“Consider the wastage of 1,400,000,000 of people [the number of the annual dead] every year. You take away the fructifying element essential to the earth. Look at the mode of cultivating the soil in Virginia. There are counties on the James River that year in and year out are cultivated without giving fructifying elements back to the soil, until absolutely destroyed and thrown into commons.

“The thing most essential for the growth of vegetables is carbonic acid. It is a grand mistake to urn your ashes. Let them be scattered over the fields. The baby born weighs two pounds: this body weighs two hundred and fifty pounds. Where did I get it? By eating wheat and fruits and meat. If I bury my body beyond fructification, I am a thief. You can appeal

to the fine fat fellows, the gourmands. Tell them, if I die, my gases are given to the earth, my ashes are scattered over the earth, and nourish the seeds and plants. The ox eats the plants, and men eat the ox, and those very elements come back and live again. Physical existence must be pleasing to such persons.”

So, then, we are to burn our fathers and our grandfathers in order that strawberries may be sweeter, and cream richer; that wheat may be cheaper, and beef more abundant.

O fools and slow of heart, to think men are to be moved by such arguments as these! Why, New York City, alone, yearly pours from its sewers into the abyss of the Atlantic a vastly richer freight of vegetable possibilities than the smoking fires of a world's cremation could produce.

Again, when a man is buried, what becomes of him? Just as surely must the elements out of which he is made return to the soil as though his ashes were preserved in a sepulchral urn. If the hygienic necessities of modern civilization demand it, by all means let us have cremation. But if a pretentious economy is all that is offered, far more precious are the hallowed associations of the past, and the sacred memories of our buried dead.

PRESCRIPTION-WRITING.

ALTHOUGH it is of very much more importance what is put in a prescription than how it is written, yet the reputation of a physician as an educated man, if not as a practitioner, is, we think, greatly affected by the manner as well as by the matter of the doing. We have not, however, taken our editorial goose-quill in hand for the purpose of inditing a homily upon “prescription-writing:” we merely want to call attention to an error which seems at present universal; at least we have not seen a prescription in the last two years correctly written, and we have looked at a good many hundred of those of the most prominent physicians. As every one knows, chemical nomenclature has gone into the line of the acrobat, and in the last few years somersaulted most actively. As no one seems to know, the United States Pharmacopœia has, to a certain extent, followed these changes. It is now no longer correct to write *magnesiæ sulphas*, or *sodæ sulphas*, or *potassæ nitras*. The name of the metal itself is employed, not that of its oxide. Thus, the substances mentioned should be respectively called *magnesiî sulphas*, *sodiî sulphas*, *potassiî sulphas*. Again, neither *ammonii* nor *ammoniæ murias* is officinal, but *ammonii chloridum*. *Verbum sat sap.* Look at your Pharmacopœias.

CREDULITY.

ACCORDING to the foreign correspondent of the *Medical Investigator*, Dr. Horn, a German homœopath, has discovered the veritable *corpus delicti* of cholera. It seems that a person who has swallowed similia similibus curantur in therapeutics has in the operation so stretched his intellectual throat that a boa-constrictor would hide his head for shame and envy at the human capacity for swallowing.

The cause is as follows:

"The cholera originates from two factors or agents acting upon the human organism in a very noxious manner.

"1. From a reduction of the *magnetism of the earth*, which penetrates every individual; and

"2. From the action of a *positive* electric current of the earth, of *volcanic* origin, touching our city for some time already, and rendering our atmosphere *negative*-electric by influence.

"From the effects of the *latter* electricity, an increased quantity of certain *carbo-nitrogenous* compounds arises in the blood, whereby the lower forms of cholera are produced, as those compounds or bodies affect the blood to some extent, while the malignant and, as yet, incurable forms of cholera originate by a poisoning of *prussic acid* and *hydrocyanic acid* compounds, which, under certain conditions, are developed out of the *carbo-nitrogenous* bodies."

CORRESPONDENCE.

TO THE EDITOR OF THE PHILADELPHIA MEDICAL TIMES:

DEAR SIR,—The leading article in the *American Journal of the Medical Sciences* for April is a study of the functions of the human brain, by Prof. Bartholow.

Mary Rafferty, æt. 30, Irish, was admitted to the Good Samaritan Hospital,—Cincinnati, we presume,—and there suffered certain things, now to be told, at the hands of a good Samaritan. Had Mary been other than "feeble-minded," perhaps she might have been in doubt as to whether the hospital in which these things were allowed was not a misnomer, and whether some other of the earlier-mentioned personages of that curious parable might not have been more rightly honored in the naming of it.

The experiments made on the vile corpus of Mrs. Rafferty seem to have been done without her assent. First, the dura mater and brain were mechanically irritated. As to results, we shall say little or nothing. Second, two needles were carried into the dura mater, and an induction-current passed through them. Third, an insulated needle was passed *into* the left posterior lobe of the brain, etc. A form of convulsion was brought on by the passing of an electric current in this case from the dura mater to the needle in the brain. Unpleasant sense of tingling occurred, but, "notwith-

standing the very evident pain from which she suffered, she smiled as if much amused." A less than little knowledge was good for her comfort. But see what was next done to her. The needle was passed into the right posterior lobe of the brain, which, it seems, caused acute pain in the neck. The current was made more powerful than in the last case, when she "exhibited great distress," and proceeded to have a well-organized fit of epilepsy, followed by coma. Suppose, Dr. B., that Mrs. R.'s tortured body had been meanwhile deserted by its tenant,—life,—would this have been any form of manslaughter? Yet some of us have seen folks die in a fit.

Two days later it was meant to examine the posterior lobes by galvanism; but, strange to say, her lips were blue, she was pale, depressed, and had evident difficulty in locomotion. So the experiment was given up. Also, then and there, she had a slight fit, and also one next day, followed by palsy. It is not stated that she died, but in the next paragraph we have the autopsy described. Yet, after the facts above given, an ante-mortem section would have been in order, and might have been made, and called by courtesy an autopsy.

"*Results of cadaveric section.*—The needle-tracks we learn could be distinctly traced. They entered the brain *one and a half inches!*"

"The needle-tracks were marked by lines of diffu-
lent cerebral substance."

Dr. B. thinks needles cannot be thus used in the brain without mischief. The fatal result was due, he thinks, to the extension of the epitheliomatous ulceration to the sinus; to consequent thrombus, arachnitis, etc. Let us hope that there was no other factor in the grim equation of this poor woman's death. No man on earth can settle this question. There should never have arisen for settlement so ghastly a query. No craving for knowledge, no need for it, can be called upon to justify an act which subjects a poor feeble-minded hospital patient to experiments which cause convulsions and leave the brain in a state of local softening.

A HOSPITAL PATIENT.

NOT OF THE GOOD SAMARITAN HOSPITAL.

PROCEEDINGS OF SOCIETIES.

PHILADELPHIA COUNTY MEDICAL SOCIETY.

A CONVERSATIONAL meeting was held Wednesday, January 28, 1874, at 8 o'clock P.M.

DR. I. E. ESHLEMAN, VICE-PRESIDENT, in the chair.

DR. W. B. ATKINSON introduced Mr. MORTON, who exhibited a specimen of Dr. Grosvenor's improved belladonna plaster, which he said was of official strength.

RAPID DILATATION OF THE UTERUS.

DR. WILLIAM GOODELL made some remarks upon the rapid dilatation of the cervical canal, and exhibited the dilators of Drs. Wilson, Atlee, and Molesworth. He gave the history of several cases of dysmenorrhœa, ante-
flexion and retroflexion, in which he had obtained

marked relief by this method. When the woman is married he prefers to introduce the dilator by means of a speculum; but when unmarried, without. In tortuous and contracted cervical canals he formerly had been days, and even weeks, in gaining the cavity of the uterus by relays of the smallest of sponge-tents. But now he would undertake to tunnel out the most contracted canal in less than fifteen minutes' time. The method he recommended is as follows. The smallest of the dilators is introduced as far as it will go, and then opened. After gently stretching that portion of the canal it occupies, the strictured portion just above so yields that, when the instrument is closed, it can be made to pass up higher. Thus, by similar repetitions, little by little, the dilator tunnels its way into the uterine cavity. When this is reached, the blades are withdrawn for about half an inch, viz., far enough to keep their tips clear of the fundus, and then their handles are brought firmly together. In bad cases of metrorrhagia arising from fibroid tumors, he had successfully made use of an intra-uterine injection of the undiluted tincture of iodine, and had obtained a free channel for the escape of the fluid, by first stretching open the canal by the dilator, and then introducing the slender nozzle of the syringe between the open blades. He had also found this instrument to be very efficient in preparing the cervical canal for the admission of a very large tent or a batch of tents, by which the requisite amount of dilatation could be effected by but one operation. This he considered a step in the right direction, for it is usually not the first tent or batch of tents introduced at the first visit that do the mischief, but those introduced on the second or third visit. The pressure of the first tent produces a congestion or traumatic irritation of the cervix. Its removal abrades the mucous surface more or less, and by this raw and now actively absorbent surface are taken into the system the putrid discharges generated and retained by subsequent tents.

Dr. I. E. ESHLEMAN requested Dr. Goodell to go further in his excellent remarks, and explain to the Society how, according to his experience, the cervix might best be prepared for the introduction of the dilators, when found so contracted as to resist the introduction of the most delicate silver probe.

Dr. GOODELL replied that when the os externum is too contracted to admit the tip of the dilator, he first bores open with the pointed blade of his scissors.

Dr. T. M. DRYSDALE said he agreed to most that Dr. Goodell had stated in reference to the use of the uterine dilator, and, like him, regarded it as a most valuable instrument. As regards the uterotome, he did not consider it a dangerous instrument when properly employed. He had operated freely with it for many years, and had yet to see an unpleasant symptom from its use. He had been surprised to find so little said about the dilator in works on uterine diseases or in the journals. He had recently seen an article on the subject, which was published in a January number of the *Medical and Surgical Reporter*, by Dr. Goodell. He had read that paper with much pleasure, but wished to correct an error in it. In the article referred to, Dr. Goodell, after describing the method of using the dilator and its various applications, says, "It is but just to add that to Dr. Ellwood Wilson is the profession of this city indebted for this method of rapid dilatation, a method which bids fair to revolutionize the treatment of many uterine disorders" (*Medical and Surgical Reporter*, January 17, 1874, p. 49). This was a mistake. To Dr. W. L. Atlee was due the credit of introducing this method of treatment. The uterine dilator was invented by Dr. Washington L. Atlee, of this city, his first instrument being made under his instruction by Mr. Liemann, of New York, in 1861. The instrument became pop-

ular with the profession of that city under the name of Atlee's dilator, and Liemann published a wood-cut of it in his catalogue under the same name. He also wrote to Dr. Atlee asking him to furnish a description of the instrument and its use, for publication in one of the New York journals. Mr. Gemrig, of this city, having had repeated demands for the dilator, called on Dr. Atlee for his instrument, and from this model made others, which are sold by him and described in his catalogue as Atlee's uterine dilator. The instrument and one of its uses are referred to in the address on obstetrics, by Dr. W. L. Atlee, published in the Transactions of the State Medical Society of Pennsylvania, 1872, p. 61, but it is more particularly described in an article on "The Uterine Dilator," by Dr. W. L. Atlee, in the *American Journal of the Medical Sciences* for April, 1871, p. 395. He had used this instrument since 1861 as a dilator in cases similar to those described by Dr. Goodell, and knew that Dr. Atlee had also used it for the same purpose. He had also applied it after section with the uterotome, to keep the cervical canal patulous. Its name, however, implies its use.

He had made trial of Dr. Molesworth's instrument, but had been disappointed in the use of the smaller tube. The first time he filled the smallest one the inner fibres of the rubber ruptured, causing a large swelling or tumor to form on its side. Another tube supplied by Dr. Molesworth ruptured in a similar manner. Since then, he has had two others sent to him, but has not tested them. He would fear to use the tubes without first trying them. In reference to Wright's pessary, an objection to its use was that it became corroded when retained for any length of time in the uterus. He had used it, however, successfully in retroflexion.

REVIEWS AND BOOK NOTICES.

A MANUAL OF MIDWIFERY, INCLUDING THE PATHOLOGY OF PREGNANCY AND THE PUERPERAL STATE. By Dr. KARL SCHROEDER. Translated into English, from the Third German Edition, by CHARLES H. CARTER, B.A., M.D., etc. New York, D. Appleton & Co., 1873.

A work like that before us stands almost alone. Its style is profound, minute,—in fact, German. There is no elaboration; each short sentence contains the germ which, in a diffuse English or American author, would spread over a paragraph or page, and then serve by its very mass to conceal the truth it professed to elucidate.

To minds of a certain class, to the slaves of method, who find their solace in always knowing what and where everything is, on the shelves of whose memories every fact ever met with is always placed in its appropriate spot, ready for use, a book like this is a joy. Like the various heads of an old-time New England discourse, Schroeder has arranged everything. Everything that can happen, everything one can do or see in the lying-in room, is provided for in his scheme, under its appropriate heading. To some, the restraint of such a system is galling; yet the patient study of the manner, to say nothing of the matter, of such a work, would make many an apt observer of far more value to himself and the world. The book cannot be skimmed; it must be studied. Its sentences need often, so we have found it, to be read and read again, before their exact import is fully understood. Nor is it a book in which the undergraduate would revel, as an easy method of learning midwifery. Compact, dry, scolding illustration, it is a book for the true student, for him whose school is over only when his days are done.

The work is divided into eight parts, the parts into chapters. For want of space, we will confine ourselves to Part VI. almost entirely. As an illustration of his method, we give the scheme for the pathology of parturition:

"1. Too feeble action of the expelling forces. 2. Too great obstacles. 3. Dangerous accidents, which do not interfere with the mechanism of parturition."

Each topic is concisely but completely handled. For too feeble pains the author does not employ ergot,—using that drug only to cause expulsion of the placenta and firm contraction after delivery. He says, p. 161, "Ergot is hardly able to contribute to the expulsion of the child;" while, "in many cases, uniform and marked pains are produced by no remedy better than by opium," which he gives in grain doses, once or twice repeated. The use of the catheter between the child and the uterus, even after the rupture of the membranes, he highly recommends in feeble or absent pains. In regard to the method by external pressure, he advises it in true breech-presentations, in combination with traction, as being less likely than the latter alone to displace the arms of the child. In the method of accouchement forcé, the author, if dilatation by the hand fails, advises incisions of the os,—"*in primiparæ*, where the edges of the os are very sharp," doing the operation with blunt-pointed bistoury or scissors, curved on the side, incising two or more places. He says, or his translator says for him, "The incisions need not be too deep." And again, "It is known from experience that the incisions do not tear more:" which is comforting, if we could always rely on experience.

We quote from the author's description of what forceps should be (p. 172): "As regards the head-curves of both blades, the tips of the bow must not meet when the handles of the forceps are brought together, but should be distant more than one-third of an inch. The greatest distance between the bows must be 2.7 inches. The pelvic curve need not be very great, and is gradually to increase from the lock upwards to the lip." And again, "The ideal forceps would be such as allowed a sufficiently firm hold without exerting the least pressure upon the head."

On p. 174 we find five conditions given, all of which should be present in the application of the forceps. The fifth is that "The small fontanelle must be directed forwards." In commenting upon this afterwards, he says the fifth condition is very desirable, but not absolutely necessary. Another condition is that the head must have entered the true pelvis already. If immovable above the brim, he considers, even in the case of a normal head, in a normal pelvis, the instrument dangerous, "for the forceps can only lie transversely in the outlet, and the head, if possible, always so turns within the forceps that the blades lie on each side;" and, "unless the dimensions of the pelvic cavity are uncommonly great, the frontal bone of the child may, if powerful traction be made, be broken against the promontory of even a normal pelvis."

When we consider that the author has been quoted as an advocate of the doctrine that the occipital posterior positions rotate anteriorly in the grasp of the forceps, as a rule, we are surprised at the above, and at the following, from p. 178: "As long as the large fontanelle is directed forwards, the forceps are not to be applied."

After advising turning in face-presentations, whenever possible, he says (p. 179), "Even in head-positions in cases where both operations are practicable" (*i.e.*, forceps and version), "turning is always to be preferred." In other words, all cases of movable head, head not engaged at the brim, are to be turned.

We turn now to p. 180: "The application of the forceps in a contracted pelvis may be followed by the

saddest consequences to the mother and child." The panacea then, according to Schroeder, is version for all difficulties where version is practicable. In noticing, some time ago, the work of a British obstetrician, we characterized the treatment of the subject of the forceps as timid, and the views of the author before us on the same subject seem both timid and limited. Surely we do these things better in America! Is it because we employ better instruments? Do we not advocate the use of the forceps to overcome slight contraction of the brim? Is version a better resort? According to our author, it is not always a happy entrance into life. "When the breech is born, and the placental circulation disturbed, the mouth not being accessible to air, the first breath is followed by an inspiration of foreign bodies, and, consequently, by asphyxia. . . . It may also be caused by pressure on the cord." The author, therefore, advises the most rapid extraction, which he "considers without the slightest difficulties." He hastens, "not from the fear of not being able to resuscitate the child, but because, by the first inspiration, foreign bodies enter the air-passages, which may there produce a fatal inflammation." While the mother is uninfluenced by the method of delivery, or it is about as favorable as head-first labors, the child fares far otherwise. And, again, great stress is laid (p. 185) on the "foreign bodies drawn into the air-passages," which "may, within the first few days after birth, produce lobular pneumonia," and the prognosis is said to depend on the success of the treatment of the effects of premature respiration. We have no statistics at hand to show the number of children dying shortly after head-last labors, of lobular pneumonia, and can, therefore, only call attention to the above. It is our opinion, however, that children recovering from the asphyxia of cord-pressure have a much better chance of life than the above would seem to indicate.

We have here attempted a hasty notice of Chap. I., Part VI.

Perhaps no portion of the work is more clear and true than that on the induction and necessity of premature labor. As regards artificial abortion, in cases where the child cannot, by reason of tumors, or want of size in the pelvis, "pass through it anyway," "it must rest with the mother to decide, at the commencement of pregnancy, as well as at term, whether, for the sake of her offspring, she will place her own life in danger."

As to the merits of the translation, we say but little, leaving it rather for professed German scholars; but that its English is not always easily flowing, its obscurity sometimes the fault of the translator rather than of the author, is saying but part of the truth, if we believe, as we have some reason to, that certain unwarranted liberties of omission have been taken with it by the gentleman who has given it to the English-reading world. E. W. W.

CONJUGAL SINS AGAINST THE LAWS OF LIFE AND HEALTH, AND THEIR EFFECTS UPON FATHER, MOTHER, AND CHILD. By AUGUSTUS K. GARDNER, M.D. New York, G. T. Moulton, 1874.

"To the reverend clergy of the United States, who by example and instruction have the power to arrest the rapid extinction of the native American people, to prevent the brutalizing of their bodies and the degradation of their sensibilities, this work is most respectfully dedicated by the author."

For two years—we learn from the preface, written by one who signs himself "The People's Servant"—this work has been out of print. Probably long ere this time the children have been crying for it; crying in that place where Virgil heard their voices, lamenting the life they never knew.

The appeal to the clergy by a neat dedication is a 'cute way of securing the advent under moral auspices, and surrounded with a pious halo, of a book which, however, on nearer inspection may prove as little sanctifying as that peculiar luminosity observed at times about decaying fish and fungoid vegetation.

The clergy have never shown a willingness to deal with subjects of the kind. It is doubtful whether they can do so to advantage. One truly good man, now no more, made the attempt, and with the result that whenever his name is mentioned there rises in the mind the name of his book,—let us call it "The Alligator in the Hen-roost,"—and he goes down to posterity as its author no more fondly remembered for it, we fear.

The remedy lies, if anywhere, with the medical profession: its relations to the public, and *its* relations only, are such that it can touch the subject without indelicacy and without defilement, but it must be in some better way than by books sent broadcast over the land. The weapon, though useful, is too dangerous to be fired at random.

Too often, also, there lurks in the shadow of such attempts a deep and unworthy design,—professional advertisement, in its most sinister form. We do not say that this book implies it; we have seen others far better fitted to succeed in such an attempt; but such works are always to be regarded with suspicion, till proved honest and true.

The mere writing of such books is easy. Some slight acquaintance with French literature of a certain sort, free quotation, authorities cited from every direction, some discussion—to keep up the moral atmosphere—upon the Mosaic law, some newly-furbished hypotheses and startling assertions, and, lastly, a correct tone,—nothing vulgar. It was the boast of a certain writer of dubious novels that in all his prurient volumes there was not one improper word.

The language of the book is somewhat obscure in places, probably from the fear of offending delicacy. It has its theories, vague and wild enough at times; its quotations, wilder than itself. Like all other authors of like works, the writer has his say concerning the best methods of elevating the standard of the race. He believes that the musical development of the past twenty years owes its origin in this country to the advent of Jenny Lind, and the musical furor which she excited, influencing in mind and tastes the children procreated during that time. Like all other books of the kind that we have read, this one considers the native American race as going rapidly to decay and extinction,—which may be true in exhausted New England and over-stimulated New York, but is by no means so in the West, or even in our own quiet "village."

The subject of the increase of population and the prevalence of criminal abortion is extensively discussed. The doctrine of "moral restraint" is inculcated by the book, and its author lends his authority to the theory that in a majority of cases impregnation is practically impossible for a limited number of days in the menstrual interim; and with these two feeble weapons he would stem the ever-swelling flood of luxury, extravagance, and their imperious demands. We wish him success. However, wherever children are valuable for what they can do when men and women, where the fields are wide that wait for cultivation, and the woods are thick that wait for clearing, in short, where the struggle for life is against nature and not against man, there child-life is always and always will be held sacred and dear. The lamented man whose much-ridiculed advice was, "Go West," probably did more actually to prevent infanticide than has been done by the authors of the many books of which "Conjugal Sins" is one.

GLEANINGS FROM OUR EXCHANGES.

MERCURY IN SYPHILIS.—In a paper published in *The American Journal of Syphilography*, April, 1874, Jonathan Hutchinson, F.R.C.S., arrives at the following conclusions:

That mercury is probably a true vital antidote against the syphilitic virus, and that it is capable of bringing about a real cure.—That, in practice, a good many cases are really cured by mercury; the cure being proved by the restoration to good health, and, in some cases, by renewed susceptibility to contagion.—That the probability of cure depends upon the stage of development attained by the disease when the remedy is resorted to, and upon the perseverance with which it is used.—That, in order to secure the antidotal efficacy of mercury against syphilis, it is desirable to introduce a considerable quantity into the system, and to protract its use over a very long time.—That ptyalism and other evidences of the physiological action of mercury, so far from being beneficial, are, if possible, to be carefully avoided, since they prevent the sufficiently prolonged use of the remedy.—That in cases in which the patient shows an idiosyncrasy peculiarly susceptible to mercury, the indication is to reduce the dose rather than to omit the drug.—That it is impossible to begin the administration of mercury too soon, and that it should be resorted to without loss of time in all cases in which a chancre shows a tendency to indurate.—That many cases of indurated chancre, treated early by mercury, never show any of the characteristic symptoms of the secondary stage.—That in other cases of mercurial cure of the chancre, in which yet secondary symptoms do occur, they are usually milder than if allowed to develop without specific treatment.—That when mercury does not wholly abrogate the secondary stage, it exhibits a remarkable power in delaying it.—That delayed outbreaks of secondary syphilis are to be regarded rather as proof that the administration had not been sufficiently persevering than that the remedy was not efficient.—That it is probable that the risk of tertiary symptoms is in ratio with the severity and prolonged duration of the secondary stage.—That there are some grounds for believing that the tertiary symptoms of syphilis are both less frequent and less severe in those who have been efficiently treated by mercury than in others.—That mercury, cautiously given, does not, in a great majority of instances, do any injury to the general health, and that its local inconveniences may usually be prevented.—That the doctrine of the real antidotal character of mercury, in respect to syphilis, ought to lead to much more prolonged administration of it, with the hope of destroying utterly all lingering germs of the malady.—That most collected statistics as to the duration of treatment and freedom from relapse are misleading and worse than useless, because usually the treatment was far too short to be effectual.—That it has not yet been proved that there are any special forms of syphilitic disease in which mercury ought to be avoided, although, as a general rule, it is acknowledged that it must be used with more caution in all forms which are attended by ulceration than in others.—That iodide of potassium possesses little or no efficacy against either the primary or secondary form of syphilis.—That the efficacy of mercury is often most signally proved in cases which have utterly resisted the action of iodide of potassium.—That it does not much matter whether mercury is given by the mouth, by inunction, or by the vapor-bath, provided that, whichever method be selected, care be taken to avoid salivation, purging, etc.—That the doses usually resorted to for internal administration are for the most part too large, and thus often necessitate a premature discontinuance of the

remedy.—That if one method of administration does not proceed satisfactorily, another should be tried; and that in no case of difficulty should the vapor-bath be forgotten.

ACUTE DESQUAMATIVE NEPHRITIS DURING GESTATION (*Canada Medical and Surgical Journal*, April, 1874).—Dr. John Reddy reports the case of a woman, æt. 38, and in apparent good health, whom he was called to attend during the sixth month of utero-gestation. She had been thirteen times pregnant,—seven coming to maturity, and five aborting. For three weeks she had not felt the motion of the child, and during that time had been troubled with severe frontal headache, accompanied by debility, partial loss of vision, and occasional confusion of intellect. She had also suffered some pain across her loins, and had had nausea. The backs of her hands and her insteps were slightly swollen towards the close of each day. In twenty-four hours she was only passing three fluidrachms of urine, which was dark, smoky, and opaque, and contained forty per cent. of albumen, a quantity of blood-corpuscles and renal débris, and one or two dark casts.

She was ordered to take, every four hours, a mixture containing ten grains of acetate of potassium and three drachms of infusion of digitalis to the dose, also a pill of compound extract of colocynth and hyoscyamus as an aperient, and a lamp-bath for twenty minutes. The following day she passed three and a half drachms of urine of the same character as the first. The next day there was marked œdema of the hands, feet, and legs. The face began to look puffy, and she only passed four and a half drachms of urine. For the next six days her condition grew worse; the œdema increased; loose crepitant râles were heard about the base of the lungs; she had severe headache and much dulness of vision; she only passed from two to four drachms of urine daily, so that in eight days the total quantity passed was but three ounces. It was then determined to induce artificial labor, which was done by injecting tepid water between the membranes and the wall of the uterus. There was considerable hemorrhage before delivery took place, and the fœtus was found extensively decomposed. The placenta had undergone almost entire fatty degeneration. She reacted rapidly, and the next day passed over a wineglassful of urine. She was ordered vaginal injections of Condyl's fluid, \mathfrak{z} i to a pint of tepid water, and moderate doses of iron and quinine. The following day she passed seventeen and a half ounces of urine, slightly muddy, and containing about eight per cent. of albumen; the œdema had perceptibly abated, and her respiration was quite free. The next day she passed thirty-three ounces of urine of a pale straw color, normal under the microscope, and without a trace of albumen.

From that time she progressed steadily towards a cure, with no further trouble except an attack of crural phlebitis, which yielded readily to treatment.

It was very remarkable that no uræmic convulsions occurred during this case, when we consider the small quantity of urine passed, and the fact that many of the prominent symptoms, as headache, nausea, dimness of vision, etc., were present.

THE KAK-KE.—We have received a late number of the *Japan Mail*, containing an interesting description, by Dr. Hoffman, of a species of endemic disease, known as *kak-ke*, peculiar to the islands of Japan. The malady is said to possess considerable similarity to the Indian disease called *beri-beri*, and by the Dutch, and subsequently by other foreigners, was erroneously supposed to be identical with it. It makes its appearance regularly at the beginning of spring, first attacking only such persons as have suffered from it in preceding years, and on the approach of warm weather assails,

also, those whom it had hitherto spared. The characteristic symptoms of the disease appear to be pain and stiffness in the lower extremities, accompanied by a diminution of sensibility and cutaneous œdema, beginning with the ankle-joints and rapidly extending to the knees. In addition to these symptoms there is a simultaneous occurrence of violent palpitation of the heart, to which is occasionally superadded endocarditis. The patient shows a distaste for all pursuits, and more especially those which demand exercise of intellect, while a general sense of drowsy weakness is observable. With the approach of cooler weather, the symptoms tend to disappear, even without treatment, and a slight weakness, often accompanied by anæmia, is all that now remains of the complaint; and this symptom disappears, also, in the course of the winter. In the more severe cases, however, the cure is deferred and is often incomplete, insensibility and palsy of different degrees remaining, occasionally even to the extent of complete paralysis of the upper and lower extremities, with atrophy of the part affected. In other cases, anæmia and general debility, with trembling of the limbs, remain to mark the passage of the disease.—*Boston Medical and Surgical Journal*.

NEW [?] METHOD OF REVIVING PATIENTS ASPHYXIATED BY CHLOROFORM-INHALATIONS (*The Lancet*, March 14, 1874).—Dr. Campbell, of Paris, recommends, in a late number of the *Journal de Thérapeutique*, to place persons threatened with death from inhalations of chloroform head downwards and feet upwards for between ten and fifteen minutes. He considers that death arises through syncope due to cerebral anæmia: hence the advantage of inducing an artificial cerebral congestion. The usual efforts at mechanical breathing—excitement of respiratory nerves, the drawing out of the tongue, insufflation into the lungs, etc.—may be had recourse to concurrently. Dr. Campbell mentions only one case where this method succeeded: it was suggested by Nélaton during an operation performed at Paris by Marion Sims. It would appear that the late Professor Nélaton was the first surgeon who introduced this practice. The author also thinks that the inverted position tends to drive from the lungs and trachea pent-up vapors of chloroform, which were increasing the asphyxia. It might be asked whether the stagnation in the cerebral vessels of blood charged with chloroform may not do more harm than good in these cases. Nor is it proved that death occurs generally from cerebral anæmia. The single case mentioned by Dr. Campbell has not considerable weight; but the method should be tried when an opportunity offers, and if it succeed in a series of cases, full confidence will probably be reposed in it.

COD-LIVER OIL EMULSION.—Dr. George M. Beard asserts (*Boston Medical and Surgical Journal*) that the cod-liver oil is scarcely to be perceived in the following emulsion, if the latter be carefully prepared. He says, *inter alia*:

"It takes a long time to make it, and the majority of druggists will slight it unless they are assured it will be ordered in large quantities. The latest modification that I employ is the following. If desired, Fowler's solution may be added to it. One of my patients, a physician, has added strychnine to it.

"R Glyconin, \mathfrak{z} ix;
Ol. morrhue, \mathfrak{z} iv;
Spts. ammon. arom., \mathfrak{z} i;
Vini xerici, \mathfrak{z} ij;
Acid. phos. dil., \mathfrak{z} ss;
Ol. amygdal. amar., gtt. ij.;
dissolved in alcohol, \mathfrak{z} ij.—M.

"Put the glyconin first in the mortar, then add the

oil by drops, stirring briskly all the time. When this process is completed, you will have a mass looking like and having the consistency of soft butter. Then add the other ingredients in the order mentioned; add them slowly, stirring all the time. The glyconin is made by beating yolks of eggs with a spatula until they are well broken, then add an equal measure of glycerin. It requires one or two hours to make it."

NERVOUS SEDATIVES IN GONORRHEA (*Irish Hospital Gazette*, March 16, 1874).—Dr. Parona (*Giornale delle Malattie Veneree*) has made an extended trial of chloral as an injection both in the gonorrhoea of men and in vaginal blennorrhagia, and speaks of its value as a sedative, and also as an astringent. The strength of the injection is one gramme, or one gramme and a half, of chloral to one hundred grammes of water. The injection is used three times a day, and retained as long as possible. The best time to commence it is when the acute symptoms are subsiding, and it then not only relieves the pain and distress on passing water, but also removes the discharge. Dr. Bligh (*The Practitioner*, February) speaks highly in praise of the efficacy of bromide of potassium, both internally and locally, in the treatment of gonorrhoea. He prescribes the bromide in ten-grain doses three times a day, in combination with potassium bicarbonate and tincture of hyoscyamus, from the inception of the disease, and orders a syringeful of the following injection every four hours:

R Potassii bromidi, ʒii;
Glycerinæ, fʒss;
Aquæ dest., fʒiss. M.

A draught containing about half a drachm of the bromide in an ounce of camphor-mixture, at bedtime, he found to allay the chordee almost to a certainty. He claims for the bromide the power not only of diminishing the secretions and assuaging the pain of all inflamed mucous membranes, but also of producing a *special* sedative effect upon the organs of generation.

PERINEAL LITHOTRIPSY (*The Medical Record*, March 30, 1874).—Dr. Ernest Krackowizer reports three successful cases of perineal lithotripsy, which he considers to be superior to median lithotomy chiefly for two reasons: 1, in that it dilates the wound-track, the prostatic portion, and the neck of the bladder, in a more gentle and gradual manner than it is possible to do with the finger; and 2, in that it renounces beforehand the attempt to extract a stone beyond the diameter of three-fourths of an inch, considering that the track established by median lithotomy cannot be stretched safely beyond the diameter of one inch without exposing the patient to the immediate and subsequent danger of tearing and contusing the parts which constitute the way for extracting the stone.

TORSION IN AMPUTATION (*The Lancet*, March 21, 1874).—Mr. Thomas Bryant highly recommends the practice of torsion as preferable to the use of the carbolized catgut ligature. He instances a case of amputation of the fore-arm where all the arteries were twisted except the interosseous, which was ligated, and from which severe secondary hemorrhage occurred at the end of six days. He says at Guy's Hospital there have now been upwards of two hundred cases of amputation of the thigh, leg, arm, and fore-arm, in which all the arteries have been twisted (one hundred and ten of these having been of the femoral artery), and no case of secondary hemorrhage.

RESTRAINT OF HEMORRHAGE DURING OPERATIONS ON THE MOUTH (*The Medical Examiner*, April 1, 1874).—Dr. E. Andrews suggests that the troublesome and annoying hemorrhage which almost always attends operations on the mouth, and which is so difficult to

control, can be effectually restrained by the use of an ether-spray apparatus. If the spray be directed upon the part to be operated on, the cold thus produced will thoroughly contract the vessels, and at the same time the general anæsthesia is kept up, the patient constantly inhaling the vapor. Dr. Andrews has performed uranoplasty in this manner with great freedom from annoyance.

STYPTIC COLLODIUM.—The *Dublin Medical Press and Circular* gives the following formula:

R Tannic acid, 2 ounces;
Alcohol, 4 fluidounces;
Ether, 12 fluidounces;
Canada balsam, 1 drachm;
Pyroxylin, 1 drachm, 2 scruples.

Dissolve the tannin in one ounce of the alcohol, mix the Canada balsam in the ether, add the remaining alcohol, and in the mixture dissolve the soluble cotton.

CHLORAL IN CHOLERA MORBUS.—Dr. Louis B. Bouchelle (Georgia) has employed chloral in cholera morbus for the past two years with marked success. He states that in the case of adults a single dose of twenty to thirty grains has in every instance served to quiet the stomach and bowels, and the patient drops into a refreshing slumber, from which he wakes in a few hours relieved.—*The Southern Medical Record*, January, 1874.

MISCELLANY.

WILLOUGHBY SMITH, the electrician, has recently discovered a most curious action of light in altering the electrical resistance of a metal. In experimenting for a special purpose, with some small rods of selenium, about one-twentieth of an inch in diameter by three or four inches in length, enclosed in glass tubes, with platinum terminals, he found that their electric resistance varied most capriciously, and to a very great extent. He finally traced the disturbance to the action of light, —finding that when the rods were enclosed in a dark box their resistance was perfectly normal, while even a slight exposure to light immediately reduced it some ten or fifteen per cent. On burning a magnesium ribbon at a distance of nine inches from the selenium rod, which, to cut off all disturbing action of heat, was immersed in its tube to a depth of several inches in a basin of water, the conductivity of the bar was at once increased nearly threefold, remained constant while the light lasted, and as soon as the flame went out immediately returned to its original value. The discovery excites great interest, and opens an entirely new field for investigation.—*Druggist's Circular*.

DISCOVERY OF BISMUTH.—The Paris correspondent of the *London Chemist and Druggist* states that M. Carnot, a mining engineer, reports the discovery of a bed of bismuth in the mountainous region which separates the departments of Bresse [sic: Corrèze?] and Dordogne. This had been observed by him since 1867, but only recently has he found that it could be profitably worked. It is found in combination with lead, antimony, iron, and calcium. M. Carnot has also devised a better process for the extraction of the bismuth in a

state of perfect purity. Already some two hundred and fifty kilogrammes have been supplied to the Pharmacie Centrale, Paris. This discovery is very fortunate. The high price of bismuth is consequent partly on the increased appreciation of its value as a medicine, and partly on the fact that an important source of its supply—namely, the deposit of Saxony—is nearly exhausted. At present the Bolivian mines almost exclusively supply commercial requirements, but no country will grudge France a happy turn in this or in any other respect.—*Boston Journal of Chemistry*.

A LEAD AND ZINC BATTERY.—A new form of galvanic battery invented by Pierlot is thus described in *Comptes-Rendus*: In a suitable glass or earthenware vessel is placed about a pound of chloride of lead, into which is inserted a plate of lead with a varnished lead wire attached. In the other part of the vessel is inserted an amalgamated zinc plate about nine millimetres thick, covered with a bag of parchment paper. Every two or three months water is added. The current is said to be strong and constant.—*Journal of Applied Chemistry*.

AN ODD EPITAPH.—The following epitaph is to be found in Braken churchyard, Shetland:

He was a peaceable and quiet man, and to
All appearance a sincere Christian.
His death was very much regretted,
Which was caused by the stupidity of
Laurence Collochlin Clothister, who
Gave him saltpetre instead of Epsom salts,
Of which he died in the space of three
Hours after taking a dose of it.

—*Boston Journal of Chemistry*.

CHOLERA AND THE CHINESE.—Dr. Taylor, a returned missionary from China, reports that during a residence of many years among the Chinese no cases of cholera came under his observation; and this absence of the disease he attributes to the fact that tea is the beverage of the country, and consequently nearly all the water which the inhabitants drink has been boiled.—*Dr. E. McClellan, in the American Practitioner*, March, 1874.

FOR COLD IN THE HEAD.—Hamilton recommends to mix carbolic acid 10 drops, tincture iodine and chloroform each 7.5 drops. A few drops are poured into a test-tube and heated over a spirit-lamp, and when it begins to evaporate it is placed under the nostrils. Two minutes afterwards the operation is repeated. Sneezing at first results, but relief soon follows.—*Journal of Applied Chemistry*.

TREATMENT OF CHRONIC ECZEMA OF THE GENITALS.—Dr. De Montmya recommends the use of tincture of iodine in the treatment of chronic eczema and intertrigo of the genitals, more especially combined with the use of a lotion of one part of corrosive sublimate to two hundred and fifty of water, a few drops of spirit being used to dissolve the corrosive sublimate.—*Druggist's Circular*.

ACCORDING to the *Independence Belge*, the ex-Emperess of Mexico remains in the same mental condition, her bodily health being very good.

COTTON-SEED OIL.—It is said that in the United States over 150,000 tons of cotton-seed are used, annually, for the manufacture of oil. The greater portion of this product goes to the olive-growing districts of Europe, from whence, after certain manipulations, it is returned as olive oil.—*Canada Pharmaceutical Journal*.

A SICK man, slightly convalescent, was asked by a pious friend who his physician was. He replied, "Dr. Jones brought me through." "No, no," said his friend, "God brought you out of your illness, not the doctor." "Well, maybe he did; but you can bet the doctor will charge for it."

SOME person said to Sterne that apothecaries bore the same relation to doctors that attorneys do to barristers. "So they do," said Sterne; "but apothecaries and attorneys are not alike, for the latter do not deal in scruples."—*Baltimore Physician and Surgeon*.

ACCORDING to Medical Director Joseph Wilson, U.S.N., 81,000 lives were destroyed by malaria in making the Panamá Railroad, only forty-six miles in length; one man for every yard of the track.

In the official examination of the hogs killed in the duchy of Brunswick during 1873, out of 92,605, 19 were found affected with trichina, and 18 with other diseases.

A POPULAR doctor in Chicago was presented with a silver-mounted skeleton, on New Year's day, by his admiring patients.—*Atlanta Med. and Surg. Jour.*

THE LATEST NOVELTY.—"St. Vitus's dance is one of the most novel of the diseases of the nervous system."—*Medical and Surgical Reporter*.

AMONG the advertisers in the London *Lancet* we notice Waukenphast [walking fast?] & Co., makers of tourists' boots.

ACCORDING to Johnston, 30,000,000 pounds of coca-leaves are annually used in South America.

NOTES AND QUERIES.

AMERICAN MEDICAL ASSOCIATION.

Arrangements have been made with the Lehigh Valley and Erie Railways to carry delegates to the session at Detroit, at reduced fare, via Niagara Falls and Canada. All who desire to avail themselves of this opportunity should address the undersigned at an early day.

W. B. ATKINSON, M.D.,
Permanent Secretary,
1400 Pine Street, Philada.

OFFICIAL LIST

OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U.S. ARMY, FROM APRIL 14, 1874, TO APRIL 20, 1874, INCLUSIVE.

BAXTER, J. H., CHIEF MEDICAL PURVEYOR.—To report to the Surgeon-General for assignment to duty. S. O. 83, A. G. O., April 16, 1874.

MCCLELLAN, ELY, ASSISTANT-SURGEON.—To carry out provisions of joint resolution of Congress, approved March 25, 1874, on the recommendation of the Surgeon-General, detailed to inquire into and report upon the causes of epidemic cholera. S. O. 85, A. G. O., April 18, 1874.

SATURDAY, MAY 2, 1874.

ORIGINAL LECTURES.

CLINICAL LECTURE ON SEBORRHŒA CAPITIS.

BY LOUIS A. DUHRING, M.D.,

Clinical Lecturer upon Diseases of the Skin in the University of Pennsylvania, and Physician to the Dispensary for Skin Diseases, Philadelphia.

Reported by DR. ARTHUR VAN HARLINGEN.

THE patient whose case forms the subject of our study to-day complains of an affection, not indeed severe, and certainly not dangerous, but yet one of such character as to claim close study of its features and careful treatment if we would succeed in its cure.

He is, you observe, a man of middle age, pale, and evidently out of health. A weaver by occupation, he is confined much of the time to a dark, unwholesome apartment; his hygienic surroundings, in fact, are bad.

The disease for which he seeks relief we find to be localized in the scalp, showing itself on the surface in the form of a copious accumulation of small, pearly-white, greasy-looking scales.

The reproduction of these scales is attended with considerable-itching, and is so rapid that, although the scalp may be thoroughly cleansed in the evening, yet by the next morning they are present again as abundantly as ever.

The duration of the affection is about three months, or rather about that length of time has elapsed since the itching and scaliness first became so annoying as to attract the patient's attention. It is probable that its origin may be referred to a much earlier date.

These facts in the history of the case having been ascertained, let us examine the appearances presented, and determine, so far as we may, its exact nature.

Have any extraneous causes of irritation, such as might produce a condition like the present?

As to stimulant applications, our patient informs us that none have been made; but as to pediculi, the only other likely source of external irritation, some examination will be necessary.

The diagnosis of phtheiriæsis is not difficult, since either the unmistakable pediculus is present *in propria personâ*, or its representative ova, known by the following characteristics, may be discovered.

The ovum of the *P. capitis* is a small, pear-shaped, grayish-white body, about the size of a grain of sand, and is found attached quite firmly by its smaller end to the hair at a considerable distance from its insertion into the skin. Examination of our patient's scalp shows the absence of living pediculi; but are these grayish particles sticking to the hairs at various points, ova? At first glance, they certainly appear to be such; but on closer inspection they are seen to have an irregular shape, to be easily brushed off from the hair, and, in fact, to be in all

respects identical with the scales on the surface of the scalp.

Phtheiriæsis, then, the only remaining source of irritation, being excluded, let us proceed to an examination of the eruption itself, with the object of ascertaining which, among several affections likely to be found in this locality, we have in the present case.

There are only three diseases occurring on the scalp in a form resembling the one before us: they are *psoriasis*, *eczema*, and *seborrhœa*. It would be impossible to give such a verbal description of these affections as would enable you always, and under all circumstances, to recognize and distinguish them; experience alone will enable you to do that. Their leading characteristics, however, you should certainly be acquainted with. They are as follows:

Psoriasis capitis manifests itself in the form of dry, white scales, scattered through the scalp. It usually extends a little beyond the space covered by long hair, so as frequently to form over the forehead, ears, and neck, a whitish or reddish border encircling the scalp. It is not apt, as a rule, to itch so intensely as the other two affections under consideration, and when occurring in the head is almost invariably found in other parts of the body, especially around the elbow- and knee-joints.

Eczema capitis may occur either in the vesicular or squamous form. If it occurs in the former, the peculiar structure of the scalp modifies to some extent the appearance of the disease.

In mild cases, this variety presents itself in the form of yellowish, friable crusts, consisting of epithelial scales mingled with dried serum. On raising these crusts, the surface beneath is found to be red, shining, and moist. In severe or neglected cases the secretion of the sebaceous glands mingles with that of the vesicles, and the products of disease, becoming decomposed, give rise to a peculiar and disgusting odor. The hairs also become matted together, and the most severe form of the affection is called in some countries "*plica polonica*," a mixture, in fact, of *eczema*, *seborrhœa*, and filth.

In the squamous form of *eczema*, the scalp is red, and covered with fine, dry, white scales.

Seborrhœa capitis is characterized by the abundant production of scales in the same manner as the two diseases just spoken of, but these scales are seen, on careful inspection, to possess quite a different character from those of *psoriasis* or *eczema*. They are numerous, pearly-white, and have a decidedly greasy lustre and feel. They have also a certain cohesiveness, which causes them to accumulate in masses, but they have no tendency to produce matting of the hair.

On raising a patch of *seborrhœa*, we find the underlying skin red indeed, and somewhat shining, but with no appearance of moisture, as with *eczema*.

A careful examination of the patient before us will justify the assertion that we have here a well-marked case of the last of these three diseases,—*seborrhœa capitis*,—*seborrhœa* of the head.

There are two varieties of *seborrhœa*: *seborrhœa*

oleosa and seborrhœa sicca. The former is characterized, as its name would indicate, by increased fluidity of the sebaceous secretion, which is also poured out in such quantity that the affected skin frequently looks as if it had been freshly anointed with oil. This variety is most usually found on the face, although it sometimes occurs on the scalp and elsewhere. When persons who are exposed to dust or dirt become subjects of this variety of the disease, the visage presents a peculiar and constant grimy appearance, which nothing but frequent cleansing can prevent.

In seborrhœa sicca, on the contrary, the more solid constituents of the sebum predominate and the secretion assumes an inspissated condition; hence the name, dry seborrhœa. It is the latter variety of seborrhœa which we have in the case before us.

This affection is not invariably confined to the scalp; on the contrary, we frequently see it on the face, and, in fact, it may occur in any part of the body where there are sebaceous glands. It is decidedly more common, however, in the scalp, since in this locality the sebaceous glands are more numerous and active than elsewhere.

When seborrhœa sicca occurs in non-hairy portions of the body, its appearance is decidedly modified; fewer scales are detached, and the diseased surface usually presents simply a circumscribed patch of congested skin, with slightly roughened cuticle.

The pathology of the affection is as follows: When from any cause the sebaceous glands take on abnormal action, not only is their secretion altered in one way or another and poured out in increased quantity, but their epithelial investment itself becomes to a certain degree affected, and the lining cells are reproduced and thrown off with unhealthy rapidity. It is the cells constituting this lining membrane, as well as the inspissated sebum which mats them together, which go to form the pearly-gray scales observed on the surface of the skin.

The name of the disease—seborrhœa—is derived from the Greek, and signifies a flow of sebum to an abnormal amount, this being the characteristic feature of the affection.

The rapidity with which the scales are thrown off is astonishing. Our patient has just told us that in a very short time the scalp may become entirely covered with them. This rapid proliferation of the lining epithelium with abnormal and excessive secretion from the sebaceous follicles may go on for years if unchecked, and finally the disease may involve the hair-sheaths themselves, and cause the death of the hair. Seborrhœa becomes in this way one of the most frequent causes of premature baldness.

The origin of the affection is usually to be found in some defect of nutrition, such as chlorosis or anæmia in both males and females. In the latter, irregularity in the performance of the menstrual function is a frequent cause. In fine, all those conditions of want of health which are indicated by cold hands and feet, as well as various forms of indigestion, may be indicated as among the known causes of seborrhœa.

Our patient is evidently anæmic, and badly nourished, and our treatment of his skin-trouble will be based upon the removal of this condition. So far as he is able to follow our advice, he will take fresh air and exercise. His food shall be nutritious, with strict avoidance of pastry, fat meats, or any form of diet which may be found to cause indigestion.

As regards medicinal treatment, he will be ordered ol. morrhœæ; a tablespoonful of the oil to be taken about an hour after ordinary meals. If this does not derange the stomach or digestive apparatus, he will be directed to continue its use for several months, intermitting it for a short period perhaps at intervals. The cod-liver oil is often of decided benefit in these cases, and may be relied upon as a valuable auxiliary. But the medicine which is of paramount importance and of unquestionable service in the majority of cases of seborrhœa is iron; it is indicated and will be of service in the case of the patient before us. He will be ordered four grains of the tartrate of iron and potassium in sweetened water, to be taken thrice daily directly after eating. The use of this preparation will be persevered in for some time; several months at least.

We shall scarcely look for much improvement before a month's time. Seborrhœa is slow to get well; it is a disease which has to be treated with care and discretion, requiring time to undergo change. Until a certain alteration has been produced in the constitution of the patient, it is useless to expect a cessation of the process; for the disease in the case under consideration is no mere local trouble, but a state emphatically associated with his general poor health and improper condition. Relying upon the oil and iron for the internal treatment, together with hygienic measures, it will be necessary at the same time to employ local treatment as auxiliary means of relief. It is important to keep the scalp thoroughly clean and free from the products of the disease. To get rid of the scales we shall order him some alkaline liquid preparation. A very suitable wash for these cases is the tinct. sap. viridis,—a solution of *sapo viridis* in alcohol in the proportion of two ounces of soap to one of alcohol. This is a valuable and efficacious alkaline wash for various conditions of the scalp, and is of particular service in seborrhœa capitis. It is to be rubbed upon the head by means of a piece of flannel, adding a sufficient quantity of water to the scalp from time to time to make an abundant lather. This is thoroughly rubbed into the affected parts, and after ten or fifteen minutes completely washed out of the hair by means of an abundant supply of warm water, care being taken to rid the scalp entirely of suds. The scales will by this means be completely removed. The hair and scalp should now be dried with a soft towel until all moisture has disappeared. Some oily or fatty preparation is now to be applied directly to the scalp, and to the hair as well, in order to counteract the effect of the alkaline wash, which tends to produce shrinkage of the skin. We shall order for our patient an oil composed of one part glycerin, one part ol. ricini, and two parts alcohol, to be worked into the scalp after each washing with the soap preparation.

There are cases of seborrhœa, however, where the products of disease have been allowed to accumulate to such an extent that they form quite a crust. In such cases a quantity of olive oil—say a teacupful—should be well worked into the scalp, and the head covered with a night-cap. If this is done at night, the crusts and scales will have become so far softened by the next morning that the wash above mentioned may be successfully used.

Finally, you should remember that in such cases as these of old standing, and where the disease has made much progress, many hairs will have become loosened from their sheaths, and will remain attached to the crusts only. Of course, the first time the patient's head is thoroughly cleansed all these detached hairs come away, and the effect at times is somewhat startling. It should always be ascertained if many hairs have become loosened or entirely separated before the cleansing process has been commenced, that the patient may be warned of the probable result.

ORIGINAL COMMUNICATIONS.

INTRA-UTERINE MEDICATION, — A NEW APPLICATOR.

BY H. E. WOODBURY, M.D.,

Washington City, D.C.

IN the *Medical Times* of April 4, 1874, "Subscriber" expresses his conviction that by Dr. Goodell's method applications cannot be made to the cavity of the uterus. After a careful perusal of Dr. Goodell's paper, I fully concur with "Subscriber" in his belief that before the mop reaches the fundus the fluid it contained will have been pressed out and taken up by the cervix.

Since the publication of my article in the *Medical Times* (April 26, 1873), "A New Instrument for treating Diseases of the Neck and Cavity of the Womb," I have been studying this subject carefully, with the view to construct an instrument by means of which applications may be made to the uterine cavity, thoroughly, effectually, and to which the objections entertained by many as to intra-uterine injections may not apply.

While my experience with the uterine injector referred to above has been extremely satisfactory, I have been anxious, if possible, to improve upon that method, and now present to your readers, and to "Subscriber," a safe and sure instrument for the accomplishment of the desired end.

My instrument, the applicator, very much resembles the injector in shape, so far as the glass tube is concerned, the only difference consisting in this, that in the applicator the openings at both terminal extremities are of the same diameter, while in the injector one of these is capillary. The edges of these openings are well rounded by heat.

Through this tube I pass a piece of steel wire about two inches longer than the tube, the temper being removed from the last two inches of this,

so as to permit of its being bent to any desired curve.

The instrument is used as follows. We first moisten the end of the wire, and wrap closely around it just enough of cotton to admit of its being drawn back into the tube without difficulty. The cotton is then dipped into fuming nitric acid, tinct. iodine, strong solution of carbolic acid, or any other fluid we may select, and withdrawn into the tube. The end of the tube is well wiped, and through the speculum introduced into the womb, dilatation of the ostium internum being sometimes necessary, in order that the tube may be passed. When the tube has entered as far as is necessary, we gently push the mop into the cavity. Thus it will be seen that our remedial agent is entirely under our control, and the cotton is not "squeezed dry" by coming in contact with the mucous surface of the cervix, as in Dr. Goodell's method.

If deemed desirable, a few drops of the fluid may be drawn into the tube, if we wrap enough of cotton on the end of the wire to make it act as a piston. This will flow out slowly, guttatim, when the wire is pushed in, and not with the force of an injection.

I have used the applicator in several cases, with entire success. No unusual irritation has attended its use. The introduction of the solid nitrate of silver, as recommended by Goodell and others, into the uterine cavity, is often attended with unpleasant results. The chemically-pure nitric acid applied by my method seldom occasions any other sensation on the part of the patient than a feeling of warmth in the organ, and the promptness with which the symptoms yield to this mode of treatment is in the highest degree satisfactory. I feel confident that in this instrument the desideratum has been attained, and that the profession, after a fair trial, will give it their unqualified approval.

LEAD-POISONING FROM EATING PRESERVED FRUITS.

BY T. HALE STREETS, M.D., U.S.N.

A CASE of lead-colic occurred on board the U.S. steamer Portsmouth, in the person of Mr. Dupleman, the apothecary. Mr. D., who is likewise a chemist, discovered the source of the poison to be in the canned preserved fruits which he had been eating.

As "an ounce of prevention is worth a pound of cure," a few words of caution here will not be inadmissible.

Tin is cast into various forms, and is alloyed with several metals for domestic and other purposes. Tin cans are made of sheet iron coated with tin; a little lead is added to give it greater toughness. After the opening of the tin cans containing preserved fruits of any kind, as apples, plums, gooseberries, currants, cranberries, oranges, etc., etc., they should be emptied at once into some non-metallic vessel, as these fruits contain citric and malic acids abundantly, which will, with the help

of the atmospheric air, act upon the tin- (lead-) coated surface of the can, and become in consequence poisonous.

A piece of the can was tested with the blow-pipe, and the charcoal support became covered with the yellow oxide of lead. The plum-jam, which was the substance examined, had, after standing three or four days in the opened tin can, a very sour taste, and a nauseous, metallic after-taste.

To a solution in nitric acid there was added first, sulphuric acid, which gave a white precipitate of sulphate of lead; second, hydrochloric acid, which gave a white precipitate of chloride of lead; third, chromate of potassium, which gave a yellow precipitate of chromate of lead.

TWO CASES IN WHICH ESMARCH'S BANDAGE WAS APPLIED.

BY H. CULBERTSON,

Assistant-Surgeon U.S.A., Retired.

CASE I.—S. C., a young lad, aged 18 years. In January, 1872, took cold, and incurred a general inflammation of the periosteum of both tibiae, which disease involved the lower epiphysis in both limbs, did not destroy the integrity of the left, but impaired greatly the motion of the right ankle. By free incisions and other treatment, the diaphysis of the left tibia was preserved; but, although the same means were employed with the other leg, the shaft of the right tibia became necrotic to a limited extent. A sequestrum formed about the medullary canal, small in diameter, and the entire length of the shaft. Here and there were dead portions of the surrounding tibia, in patches, one an inch square, which connected with the disorganized medullary canal, and through which were openings (sinuses) leading to the surface of the leg. The tibia itself was enlarged and hardened, but no new bone was deposited about it. The interior of the bone was irregular in outline, and there was quite a cavity at the upper end of the diaphysis, and the endosteum was destroyed. It would seem clear that there was in this limb endosteitis as well as periosteitis, that the endosteum and a very thin layer of bone around the medullary canal, with here and there portions of the entire thickness of the bone, were destroyed by the inflammation. During the last two years the internal dead bone became absorbed to a narrow portion (not over one-fourth of an inch in diameter), and the removal of its animal matter rendered it so brittle as to crumble upon light pressure between the fingers. There were six or eight sinuses, which discharged moderately. To remove these necrotic portions of bone, the following operation was performed, March 11, 1874, there having been previously improvised an elastic bandage six yards in length, and made of garter-elastic three-fourths of an inch wide, three widths being sewed together when the material was stretched:

The patient having been chloroformed, the bandage was applied tightly, and then the fillet above it, at the lower third of the thigh. An incision was then made along the middle of and down to the tibia, the periosteum separated, and, with a centre-bit and carpenter's brace, a round section of the bone was bored out at three different points along the tibia, and the intervals cut out between these with a bone-chisel, so that there was a gutter five and a half inches in length and three-fourths of an inch in width, which reached down to the internal cavity of the bone. All the diseased bone was removed and the cavity smoothed up with a gouge, and cleansed,

and powdered alum thrown in freely, and finally it was lightly packed with dry cotton, a compress placed over the cotton, and a bandage over all. It required one hour to complete the operation, and scarcely any blood was seen during its performance. When the fillet was loosened, the bone bled for a few moments only. The next day the compress was removed, a simple bandage applied, and cold-water dressings employed. After the cotton separated, the cavity was dressed with flaxseed oil and carbolic acid. Acute pain in the limb followed for some days, but was controlled with free doses of morphine. The patient was given at once tr. ferri chloridi and quinine. No unfavorable complications resulted, and now (thirteenth day) the cavity is granulating, and the patient's general system is in good condition. The fever was controlled with tr. veratri viridis.

Drs. C. C. Hildreth and E. D. Safford, of this city, assisted in this operation.

Case II.—John W. S., æt. 32, incurred, August 29, 1873, a compound dislocation of the right ankle-joint from his foot becoming caught in some portion of a threshing-machine. The dislocation was reduced, but very active inflammation of the joint followed, and in ten days gangrene of the soft parts upon the outer side of the foot ensued, from the mechanical injury. The inflammation resulted in caries of the tarsus (excepting the os calcis) and the articular ends of the tibia and fibula. The joint was enlarged, and several sinuses discharged thin and unhealthy matter. The leg was much wasted. The general health of the man was not greatly impaired.

March 13, 1874.—The patient having been chloroformed, the bandage applied, and the fillet secured, with a view of excising the joint if possible, we made the external incision of Moreau over the external malleolus, separated the soft parts and periosteum, and sawed off the external malleolus. We found this and the fibula inflamed, softened, and carious as high as two inches and a half, also that the astragalus was carious and infiltrated with matter, and the other bones of the tarsus inflamed, and some of them softened; and subsequently that the tibia was diseased as high as the fibula. These facts having been ascertained, it was decided to amputate the limb, which was done at the point of election. During the operation scarcely a drop of blood was seen, until the fillet was removed. This patient reacted well, and I believe has done well since the operation.

Drs. E. Van Alta and O. M. Norman, of Uniontown, Ohio, assisted in this operation; also Dr. Axline, and a student, John Axline. The accident occurred in a distant part of Ohio.

ZANESVILLE, OHIO, March 26, 1874.

A CASE OF COMPLETE STRICTURE OF THE LARGE INTESTINE.

BY K. T. STABECK, M.D.,

Davis, Ill.

MRS. A., æt. 40 years, was treated for anteversion of the uterus for the past two years. For two months she wore one of McIntosh's supporters, but without any satisfactory results. Last October she was troubled with constipation of the bowels, and began to use various pills put up by patent-medicine men, with the result of irritating the mucous membrane of her stomach and intestines. This trouble increased up to January, 1874. At times she would be very constipated, and could pass nothing without the use of violent purgatives. There were also more or less swelling and tenderness on pressure. The symptoms increased, and

in the latter part of February she was seriously ill. There were very great tympanites, and frequent vomiting; food being thrown up almost always two or three hours after it was taken.

Cathartics and injections were administered, but gave no relief. For a period of two months she had no passage from her bowels. For seven months she vomited feces every day. She failed gradually, but without apparent inflammation of the peritoneum or intestines, and died in March from exhaustion. Post-mortem examination revealed a complete stricture at the angle of the transverse and descending colon, where there was a fibroid growth, not ulcerated, and apparently springing from the coats of the intestines.

NOTES OF HOSPITAL PRACTICE.

PENNSYLVANIA HOSPITAL.

SERVICE OF DR. R. F. LEVIS.

Reported by J. B. ROBERTS, M.D.

SUICIDAL WOUND OF THE LARYNX.

A SAILOR while at sea endeavored to commit suicide by cutting his throat, but the attempt proved unsuccessful; and he was, after a few days, brought to the hospital for treatment. The incision extended across the throat at the level of the larynx, making a large oblique opening into its cavity. He has no voice except on closing the abnormal aperture, which is valvular, by inclining his head forward on his chest.

Suicidal attempts on the throat are generally cuts across the larynx or upper part of the trachea, where a mortal wound is not very likely to be inflicted, since there are but few important structures lying superficially in that region. The great vessels of the neck, emerging from the thorax behind the sterno-clavicular articulations, press obliquely backwards among the muscles, gradually receding from the surface; so that when an incision is made high up the knife does not strike any important artery, unless, possibly, the superior thyroid. Throwing the head violently backwards at the moment of making the suicidal cut, tends also to draw the cervical vessels back out of the reach of the knife.

If the cut is made across the lower part of the neck, division of the recurrent laryngeal nerve and of the inferior thyroid and carotid arteries may take place, from the latter of which profuse and fatal hemorrhage would follow.

The immediate and urgent duties of the surgeon in cases of cut-throat are to arrest arterial and venous hemorrhage; to free the trachea and fauces of clots of blood, inverting the body, if necessary, to facilitate their removal, and, should respiration fail, to resort energetically to means for artificially sustaining it.

Even if death do not occur from hemorrhage into the air-passages or from general loss of blood after cut-throat, there are still complications which may arise, of sufficient gravity to imperil the life of the patient. Inflammation that follows the injury may give rise to sufficient general tumefaction and oedema within the larynx and trachea to prevent the ingress of air to the lungs, and cause death from asphyxia, as in a case of cut-throat involving the larynx, in which Dr. Levis was obliged to perform tracheotomy thirty-six hours after the injury, to relieve such complication, which threatened the patient's life. After the possibility of this occurrence has passed, and the wound begins to heal, the formation of an inordinate amount of granulations or the contraction consequent upon cicatrization may

again place life in jeopardy from obstruction to respiration, and necessitate the opening of the trachea.

Dr. Levis once saw a case of homicidal cut-throat in which the knife, having been drawn across the throat just above the hyoid bone, severed the anterior attachments of the tongue, to such an extent that the organ fell backward, covering the opening of the glottis, and producing almost fatal dyspnoea. This trouble was relieved by drawing the tongue forward with a hook, and retaining it in that position until sufficient union had taken place to preclude the possibility of its recurrence. There are also cases on record where the epiglottis, having been partially cut off, fell into the chink of the glottis, and caused death.

When this man was admitted to the hospital, about three weeks ago, the wound gaped so widely that deep sutures were put in to draw the parts together, and the head was bent forward upon the chest to keep the edges in apposition. The healing process has gone on favorably, however, and he can now talk quite well, though the external wound is not closed entirely, for the finger can be introduced between the thyroid cartilage and the hyoid bone. He says that he has no trouble, except that swallowing hard substances gives pain by the food, during its passage through the oesophagus, pressing against the inflamed larynx.

Although he is doing so well at this time, it is not improbable that he may hereafter have secondary trouble from cicatricial contraction causing narrowing of the windpipe and interfering with respiration. Should such constriction eventually occur, it may be dilated by the occasional passage of a bougie.

Permanent fistulous openings occasionally remain as a result of laryngeal or tracheal wounds, particularly when there has been loss of substance from the cutting away of fragments, as in repeated hacking with a razor. Constriction at the upper part of a wound, by impeding respiration, may also keep open a fistulous orifice below. When no such constriction exists, and there is no oedema within the respiratory tube, the edges of the fistule may be freshened and brought together by sutures; but if the superficial tissues be tense and cicatricial, a plastic operation by taking integument from the surrounding space may become necessary.

HYPERTROPHY OF THE PROSTATE GLAND, AND ITS COMPLICATIONS.

An old man complained of difficulty in emptying the bladder, stating that he suffered severe pain on commencing to urinate, and was obliged to strain a great deal to effect complete evacuation.

From the age of the patient, and as he had trouble in starting the stream of urine, it was conjectured that the trouble was dependent on a hypertrophied condition of the prostate gland. The prostate was accordingly examined by passing the finger into the rectum. By this manipulation the lateral lobes of the prostate were found to be greatly enlarged, filling up the pelvis like a foetal head in the vagina, so that it was impossible to get the finger around the whole circumference of the gland. A catheter was introduced into the bladder to determine whether there was a corresponding hypertrophy of the third or middle lobe, which, if enlarged to any marked degree, may, from its situation, immediately within the neck of the bladder, present serious obstruction to the flow of urine.

In this case the third lobe was not increased in size so much as the other lobes, as was made evident by the comparative ease with which an ordinary metallic catheter passed into the bladder.

It is not at all unusual to find in old men prostatic disease and consequent urinary troubles; since, as the urethra passes through the substance of the prostate, any abnormal development of that gland must interfere

with the calibre of the canal. If one lateral lobe is enlarged more than the other, the urethra is pushed to the opposite side, acquiring a lateral curvature, while hypertrophy of the middle lobe produces a deflection upwards, or even a valve-like closure of the outlet of the bladder. The third or middle lobe lies in the median line somewhat *behind* the lateral portions of the gland; hence, if owing to supernutrition or other pathological cause its bulk becomes increased, it pushes upwards, forming a projection into the neck of the bladder just behind the internal orifice of the urethral canal, which is therefore pushed up towards the pubes. When the bladder contracts on its contents, this projection acting as a valve shuts up, to a greater or less extent, the aperture through which the urine should pass, and the bladder, being unable to empty itself, is more and more distended by the accumulating fluid, until its muscular fibres are paralyzed; and finally the urine constantly dribbles away in small quantities. This "incontinence of retention," as it has been called, may mislead the surgeon, and prevent his comprehending the necessity for catheterization, the neglect of which may induce fatal cystitis, or rupture of the bladder from overdistention.

There is frequently great difficulty experienced in passing a catheter into the bladder in such cases, for the urethra is distorted by encroachment of the hypertrophied prostate, and the point of the instrument is arrested by striking upon the anterior surface of the middle lobe lying directly in its path. It is, however, nearly always possible to overcome this obstacle by introducing the index-finger of the disengaged hand into the rectum and strongly pushing the prostate upwards, thus lifting its middle lobe up from the urethral orifice of the bladder. If the obstruction is produced by unequal enlargement of the lateral lobes deviating the urethra to one side, the same manipulation may straighten the deflected canal. This manœuvre is very effectual, and will frequently accomplish the required object, without rendering it necessary to employ any of the so-called prostatic catheters.

As the urethra is not narrowed, but merely tortuous, and possibly very dilatatable, the catheter should be large and flexible or with an abrupt curve, so that its end may pass along the anterior surface of the urethra and over the obstruction presented by the middle lobe of the prostate. It is sometimes difficult to draw off the residual urine which lies in the lower fundus of the bladder behind the enlarged gland, and it may be necessary to raise the patient's hips to effect its complete removal.

The trouble of which this man complains is the straining and pain necessary for the expulsion of the water. This inconvenience can probably be palliated by over-dilatation of the prostatic portion of the urethral canal by means of conical flexible bougies. It must, however, be borne in mind that frequent catheterizing may produce great irritation, and that a catheter should never be allowed to remain for a length of time in the bladder.

The hypertrophied condition of the prostate gland cannot be diminished, but its temporary congestion and inflammation may be relieved by hot hip-baths, warm injections into the rectum, and rest in the horizontal position. The condition of elderly persons suffering with prostatic enlargement can be made tolerable by inducing them to avoid exposure to cold and remaining too long in the erect position; to abstain from stimulants and the use of stimulating diuretics; to refrain from indulging in sexual excitement; and to pay proper attention to the frequent and complete evacuation of the bladder, which is best effected in a prone or stooping position, so as entirely and habitually to drain the fundus.

BELLEVUE HOSPITAL, NEW YORK.

Reported by F. W. CHAPIN, M.D., House Physician.

A CASE OF ACUTE YELLOW ATROPHY OF THE LIVER.

EDWARD P., æt. 19; single; U.S.; drug-clerk; admitted December 23, 1873. Patient's father died of consumption; mother of a "flux." Patient's habits have always been very good. He denies venereal disease. Five years ago he had scarlatina. The attack was of short duration, and the recovery from it was complete. With the exception of this illness, and of an occasional cold, he was always well till two weeks ago, when he began to lose his appetite. He soon lost all relish for food, and his bowels became somewhat constipated. He took mild cathartics with relief. Still his appetite grew worse, and he weaker. During the day he had chilly sensations, which at night were replaced by slight febrile disturbance, with some sweating. He suffered no real pain anywhere, but had a sense of oppression in the epigastric and right hypochondriac regions. His food gave him no pain nor even nausea; there was simply loss of appetite. He did not notice the color of his fæces. One week ago it was noticed that the whites of his eyes were turning yellow. Shortly afterwards his skin began to assume the same hue. He gives no history of exposure to cold or moisture.

The above symptoms persisted up to date of admission, his weariness becoming greater, and his appetite remaining very poor.

On admission, the patient complains mainly of great weakness and loss of appetite, though his appetite is better than for some days past. There is marked jaundice of the skin and conjunctivæ. The urine is of a dark reddish-brown color, 1025, acid, contains bile; otherwise normal. The color of his fæces is not known. Pulse slow and tolerably full. Temperature normal. No pain, and only slight tenderness, in epigastric and hepatic regions. Lungs, heart, and spleen normal. Liver slightly enlarged.

December 24.—The patient's condition about the same. He had one discharge of clay-colored fæces last night. Case supposed to be one of catarrh of the bile-ducts. Urine high-colored, contains bile, 1022, acid; otherwise normal. Ordered pulv. aloes, gr. xii; ext. nuc. vom., gr. iss; ext. hyoscyamus, gr. vi. M. Ft. pil. no. vi. Sig.—One t. i. d.

December 27.—The jaundice persists. The patient still has no pain; complains only of weakness, and for this cause is obliged to retire at an early hour in the afternoon. Appetite is a little better. Three discharges last night of the same clay-colored passages. Urine still high-colored.

December 28.—The patient had some nausea yesterday, and has the same this morning. Ordered sodii bicarb. gr. x after each meal.

December 29.—Patient retired at an earlier hour than usual yesterday afternoon, complaining of great weakness; was aroused at 4 P.M. to receive medicine. This he did receive, but spat out immediately, and went off into a drowsy state. At 5.30 P.M. he was awakened and questioned, but his answers were incoherent. On being told to take his trousers off, he tried to do so, but seemed to forget what he was about, and got into bed with them on. The condition being considered as due probably to cholæmia, an attempt was made to give stimulants, but the patient promptly transferred the dose from his mouth to the floor, and then sank back into his drowsy condition. During the night he vomited, became delirious, and had to be tied down in bed. A hypodermic of $\mathfrak{N}^{\text{viii}}$ of Magendie's solution was given. It was some time before this seemed to take effect, but finally the patient went into a state of semicomatose.

In this condition he is found this morning: pulse 80, respiration 20, temperature $99\frac{1}{2}^{\circ}$. Jaundice much more intense. No movement of the bowels since the evening of the 27th. Ordered, as a diaphoretic and diuretic, *sps. ætheris comp.* and *liquor ammon. acetat.*, \mathfrak{zss} every hour.

P.M.—Pulse 92; temperature 99° . The above medicine was administered but once to-day, the patient refusing to swallow more. An injection brought away a small quantity of clay-colored fæces. During the injection the patient struggled deliriously, but immediately afterwards relapsed into the former state of semi-coma.

December 30, A.M.—Pulse 100; temperature 102° . Pupils slightly irregular. Pulse steadily increasing in frequency, but diminishing in force. Urine dribbles away in bed, staining the sheets yellow.

No evidences of extravasation of blood, or of hemorrhage. Liver has diminished somewhat in size. 4.30 P.M.—Pulse 140; respiration 48; temperature $105\frac{1}{2}^{\circ}$. Patient failing rapidly; cannot be roused. 6 P.M.—Tracheal râles; moaning expiration; pulse fluttering and indefinable. 8 P.M.—Patient dead.

Autopsy, eighteen hours after death.

Brain appears normal. *Heart* normal. *Lungs* congested, leathery. *Liver*.—Weight two and a half pounds; color natural; bile-ducts small and unobstructed, not bile-stained; gall-bladder contains a thin bile. *Abdomen*.—Ecchymoses in the omentum and mesentery; black fluid in the stomach and duodenum; fæces clay-colored. *Kidneys*.—small, bile-stained; epithelium fatty; markings lost.

Microscopic examination of the liver showed the liver-cells to be in a state of complete granular degeneration.

TRANSLATIONS.

ON LANGUAGE, CONSIDERED AS AN AUTOMATIC PHENOMENON, AND ON THE EXISTENCE OF A PHONO-MOTOR CENTRE.—The importance of reflex action in the animal organism is in these days universally admitted. It can no longer be limited to movements determined by the spinal cord without the intervention of the brain, but must be held to include in a general way any transformation of a centripetal impression into a centrifugal reaction. In a word, perfectly exact and incontestable reflex actions are found even in the intellectual functions, and it is the object of this paper to point out their influence in the function of language.

It is of course understood that certain reflex actions are of a very simple nature,—as, for instance, those which may be induced in the lower limbs after a section of the cord quite low down.

As we ascend in the cord, however, the higher the section is made the more complicated and co-ordinated do the various reflex acts become, until, when the cerebral lobes only are removed, even such acts as flying, swimming, and walking, according to the nature of the animal experimented upon, may be produced by excitation of the centres.

Movements brought about under these circumstances may be said to be movements of necessity. Thus, a frog deprived of the cerebral lobes, and placed in water, seems forced to make movements of swimming.

Such movements may be regarded as being influenced by nervous centres situated beneath the brain and independent of it as regards mechanism, yet which are essentially passive unless stimulated to action by the will or by external irritation. Direct action of the brain on each muscle does not usually take place, but habitual voluntary movements are probably brought about

by intermediary centres which attend, as it were, to the details.

Co-ordinative movements produced through the locomotor centres may be said to be either instinctive or acquired. An example of the first may be found in swimming with ducks, flying in the case of some birds, etc.

Of the second, we may instance such actions as placing the head under the wing during repose, since these are not performed by very young animals, but only by those older and more experienced.

Upon all such movements the will, as has been said, exercises only a general exciting and governing influence.

What is true of these general functions is also true of the language-function, for which there may be established, we think, a phono-motor centre similar to the locomotor centres above alluded to, and, like them, subject to the will. To be sure, the question is much more complex in the case of the phono-motor centre than in the case of the locomotor centres, since the nerves of impression in the former case are not, strictly speaking, sensory, and it would be difficult to demonstrate experimentally its existence and independence.

It is possible that the various reflex actions of instinct and education may be brought about by a sort of unconscious memory, which is nothing more than a frequently repeated impression which reacts on the motor cells and regulates proportionately muscular action. Having been impressed an incalculable number of times in a certain way, a given cell reacts in the same manner to an impression of a similar kind.

We believe that in language may be found all the characters of reflex acts of education. The various co-ordinating movements going to make it up are only brought about little by little, and after long education, but they are after all essentially the same as less complicated movements of co-ordination, such as those involved in walking.

In children it may be observed that the earliest efforts in language are the same among all nations, the movements being of the simplest kind. But in adults it is difficult to demonstrate automatic actions, since language with them seems constantly to be the effect of a voluntary and intellectual operation.

Occasionally, however, we may find manifest proofs of reflex action in language among adults, even in normal conditions. Take, for example, the recitation aloud of a piece of verse; how easy all goes as long as the lines follow one another in their usual order. But how difficult it is often, should a pause be made, to begin where we left off! It is necessary to go back to the beginning of the line or verse, and bring to our aid the cadence and rhythm.

How often do we find our usual expressions slipping out when they are least expected or desired! A friend salutes us with, "How d'y'e do?" and our automatic reply of "Very well" comes out, even when it expresses an untruth which we are obliged a moment later to recant.

In abnormal conditions, as aphasia, these phenomena are still more marked. You say to certain aphasics, "How d'y'e do?" they quickly reply, "Very well, thank you." "Repeat," you say to them a moment later, "the words 'Very well, thank you.'" In vain do they try: the words which were uttered automatically a moment before will not come now even at the urgent demand of the will.

Facts may be cited without difficulty to demonstrate, we believe, with considerable certainty, that there are as perfect reflex actions in the language-function as in other functions. If we bring to bear, then, in the case of this function the same laws which we know to hold good for the other nervous centres, we must admit that

there is a co-ordinating centre for language. The will does but give the order, the phono-motor centre sees to its execution.

The mechanism of the language-function may be compared to that by which a skilful musician translates his thoughts or those of some eminent composer into harmony upon the piano. So long as all his functions are properly carried on, all goes well; but should a lesion of the spinal or peripheral nerves, or of the loco-motor or the intellectual centre, occur, the performance would speedily come to a stand-still.

It is just so with loss of speech, which may be brought about by exterior organic alterations, by alterations of the phono-motor centre, or by alterations of the intellect.

Nothing seems more logical than this assimilation of acts of phonation to other movements of co-ordination; and in admitting that there exists a phono-motor centre as there exist locomotor centres we do not believe ourselves to be enunciating a new idea, but only adding to the strength of an old one by means of recent physiological facts.

We do not say, moreover, that intelligence and will do not intervene incessantly in the act of language, but we have desired to prove that in this function there is, in addition to voluntary acts, a sort of automatism which is the result of education. This automatism has all the characteristics of that which exists for other functions, characteristics which consist principally in a reflex and almost necessary succession of phenomena, which are associated by habit, and in a functional activity, only receiving from the will a general excitation.

In a word, we believe that there exists for language that which exists for walking, dancing, playing on an instrument, etc.

(From the French of M. Onimus, *Jour. de l'Anat.*)
A. V. H.

THERMOMETRY OF THE UTERUS AND ITS DIAGNOSTIC SIGNIFICATION (Dr. Wilhelm Schlesinger: *Wiener Med. Presse*).—It has been stated that in some cases in which doubt existed as to the life or death of the fœtus, assistance was rendered by the use of the thermometer, and lately the assertion has been made that the scale of the thermometer would reveal the existence of pregnancy even in the earlier months. The two suppositions which follow give the basis of this statement: 1, that the temperature of the fœtus is higher than that of the mother; and 2, that the temperature of the pregnant uterus is higher than that of the vagina, this difference being due to an increment of heat produced and furnished by the fœtus. Schröder found a difference of 0.156° Centigrade between the temperature of the pregnant uterus and the vagina, while in similar observations of Winkel a variation of 0.13° to 0.16° Centigrade was observed.

If the fœtus dies in the uterus, not only is its influence as a source of heat done away with, but heat from the uterus is absorbed by the dead mass within. Schröder further noticed that in pregnant women the temperature of the uterus exceeded that of the axilla by 0.29° Centigrade, and in women in labor the difference amounted to 0.38° Centigrade; in the case of one woman in labor, whose child had died seventeen hours previously, there was a difference of but 0.02° Centigrade in temperature in favor of the uterus. From these results, when there was but a slight or no difference of temperature between the axilla and uterus, it would be inferred that the death of the fœtus had occurred. Schlesinger by his investigations has been led to quite different conclusions. He began his studies with the conviction that no conclusions could be drawn from the higher temperature of the uterus until it was established that it was due to pregnancy; and he endeavored to ascertain the variations in temperature between different parts of the body in women who were not pregnant. In ascertain-

ing the temperature of the uterus, thermometers were used which conformed in shape to the curve of the pelvis, and, to avoid accidents from breaking, the instruments were enclosed in a silver sheath perforated with many holes. From his numerous observations Schlesinger concludes that the temperature of the non-pregnant uterus is on an average 0.10° Centigrade higher than that of the vagina, a difference corresponding very closely with that given by Schröder and Winkel as existing in pregnancy.

These results agree fairly with the ideas which prevail at present in regard to the production of heat in the animal economy. A muscle such as the uterus could not be inactive in this respect. It must also be remembered that organs which are supposed to be sources of heat are active in this respect proportionally to their size and labor. Theoretically, therefore, the uterus when actively engaged in expelling the fœtus should show a higher temperature than the same organ when at rest and quietly containing the product of conception.

Schlesinger does not wish to be regarded as asserting the contrary, but only that these differences of temperature cannot be used in making the diagnosis of pregnancy or of the life or death of the fœtus, since they exist as well in the non-pregnant woman. W. A.

TOXIC ACTION OF OXALIC ACID AND THE OXALATES.

—At a meeting of the Société de Biologie, held January 17, 1874, M. Rabuteau presented a memoir on the toxic action of oxalic acid and the oxalates, and on the methods of their elimination from the economy. After detailing the results of several experiments with the oxalates of sodium, iron, and copper, as well as with the acid itself, administered in poisonous doses to various animals, M. R. described the method of action of this agent.

He remarked that it is impossible to see in oxalic acid a corrosive poison only: in fact, one might go further, and say that the local corrosive effects are *nothing*, the general action *everything*; and that it is this action alone which is the direct cause of death, even when this ensues shortly after the ingestion of the poison.

Death has also been observed to ensue quite rapidly, without either corrosion or any lesion of the digestive tube having been subsequently established. On the other hand, the experiments which had been detailed would show oxalate of sodium to be an energetic poison without possessing any corrosive qualities.

M. R. also drew attention to the similarity between many of the effects produced in poisoning by carbonic oxide and carbonic acid on the one hand, and oxalic acid (a chemical analogue) on the other. He also described some of the symptoms of oxaluria as coming under the general head of toxic effects of oxalic acid and oxalates, formed in the system.

Finally, he strongly deprecated the use of oxalic acid in medicine even in such form as the oxalate of iron, believing its employment to be fraught with danger.

A. V. H.

EXTRACTUM CASTANÆ VESCÆ IN PERTUSSIS.—Dr. Ludwig Fleischmann states (*Wiener Med. Presse*) that during the summer and fall of 1873 he had numerous cases of whooping-cough under his care, and in the treatment of fourteen of these the extract of chestnut leaves was employed. The extract used was prepared after the formula suggested by Maisch. In some of his cases he obtained good results from this treatment, and thinks that it is most suitable in cases in which there is but little bronchial secretion, and in which the spasmodic character is well marked. W. A.

PHILADELPHIA
MEDICAL TIMES.
 A WEEKLY JOURNAL OF
 MEDICAL AND SURGICAL SCIENCE.

The Philadelphia Medical Times is an independent journal, devoted to no ends or interests whatever but those common to all who cultivate the science of medicine. Its columns are open to all those who wish to express their views on any subject coming within its legitimate sphere.

We invite contributions, reports of cases, notes and queries, medical news, and whatever may tend to increase the value of our pages.

All communications must bear the name of the sender (whether the name is to be published or not), and should be addressed to Editor Philadelphia Medical Times, care of the Publishers.

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SATURDAY, MAY 2, 1874.

EDITORIAL.

TO THE COUNCIL OF THE AMERICAN MEDICAL ASSOCIATION.

GENTLEMEN: At the last meeting of the American Medical Association, that august body very wisely created a council to determine all questions of an ethical nature, and with equal wisdom, we trust, elected you to the high trust. At a meeting of your body held May 9, at the close of the morning session of the Association, you appointed a sub-committee, consisting of Drs. N. S. Davis, R. S. Gales, and L. S. Joy nes, to report upon a revision of the Code of Ethics to a meeting of your general body to be held upon the first Tuesday of June next. On behalf of a large number of physicians, the editors of the *Philadelphia Medical Times* desire to call your attention to the subject of professional advertisement. In doing this we do not presume to offer any general rules or principles for your guidance, but we do most earnestly request that whatever restrictions bind one section of the profession shall also bind all sections; that whatever load is laid upon the profession shall press equally upon all shoulders; that there be not, as at present, a class which, by a liberal construction of the code, is allowed to advertise or to be advertised, whilst others less favored are shut off from the privilege. If, as is now the case, the use of the great modern lever, advertisement, is permitted to some and denied to others, how can you expect those who are debarred to yield other than a discontented

loyalty to your Code of Ethics and to the American Medical Association? Further, we would most respectfully submit that the debarred are the great bulk of the profession, and that loyalty discontented from just causes inevitably slides towards rebellion.

The Code of Ethics forbids physicians to advertise, and we respectfully request that the sections bearing upon this point be extended so as to apply to all alike, or else that they be stricken out and every man left to the dictates of his own reason.

As it is to-day, John Thompson, oculist, is not permitted to announce himself in the daily papers as such, and by the strict rules of the American Ophthalmological Society is not even permitted to place "oculist" upon his door-plate; whilst John Smith, physician to Round-the-Corner Dispensary, has his card as a specialist put in for him day after day, in a displayed type, which savors strongly of the patent-medicine trade. We have previously dilated upon this anomaly; to-day we have only space to denounce it as an injustice which must eventually lead to jealousy and bitterness, to bickerings and strife, or to the grievous multiplication of dispensaries, since each specialist will try to be even with his friends by founding an institution which shall advertise him within the code.

As proof of what we have said, we offer you below an exact fac-simile of an advertisement cut from the *Philadelphia Inquirer* for April 17, 1874; and we ask whether it would be possible for the personal cards of the gentlemen concerned to be put in the newspaper under more advantageous circumstances:

MEDICAL.

ORTHOPÆDIC HOSPITAL AND INFIRMARY for Nervous Diseases, No. 1701 SUMMER Street.—Service for Deformities, Tuesday, Thursday and Saturday at 12 o'clock, by Dr. MORTON, No. 1421 CHESTNUT Street, and Dr. GOODMAN, No. 1427 CHESTNUT Street.

Service for Diseases of Nervous System on Monday, Wednesday and Friday at 12 o'clock, by Dr. WEIR MITCHELL, No. 1332 WALNUT Street.

We do not blame, and we do not think the profession has at present the right to blame, the gentlemen concerned. Putting the least favorable construction upon the matter, they have simply taken advantage of an established custom for their personal advancement; putting the most favorable construction, they have only allowed their names to be used for the good of the hospital. So far as this city is concerned, the responsibility, if there be any responsibility at all, rests with the staff of that hospital which still holds the first rank among our institutions, and which originated and has persistently maintained the custom,—namely, the Pennsylvania Hospital.

We do not mean to impugn the motives of those concerned in these hospital-advertisements,—their motives are, indeed, no business of ours,—but the *fact* remains that for all practical purposes such advertisements as that here copied are personal cards, and that the specialist can have no better announcement in the daily press.

These things being so, certainly it is but proper and right that the subject should have a careful consideration by you, the highest chamber of medical ethics in the country; and we are justified in calling your attention to it.

NOTHING in this world succeeds like success. Last fall we had occasion to comment upon the exceedingly ill-advised, and meant to be damaging, attack by the *Medical and Surgical Reporter* upon *Doctor* William Pancoast, then engaged in a very bitter canvass for the position he now holds. To-day we record a very flattering editorial from the same pen, to *Professor* William Pancoast. "Consistency, thou art a jewel!"

PROCEEDINGS OF SOCIETIES.

MEDICAL SOCIETY OF THE COUNTY OF ALBANY, NEW YORK.

SEMI-MONTHLY MEETING, MARCH 11, 1874.

THE PRESIDENT, DR. JOHN SWINBURNE, in the chair.

DR. JAMES McNAUGHTON presented a report and resolutions as chairman of a committee in regard to the death of Drs. J. F. Townsend and Peter Van Buren, former members of the Society.

Dr. S. H. FREEMAN also made a report relative to the death of Dr. J. H. Lasher, a junior member of the Society. Both reports were adopted and ordered entered on the minutes.

The names of Dr. R. F. Burton, of Knowersville, and Dr. George W. Papen, of this city, were proposed for membership.

SENILE HYPERTROPHY OF THE PROSTATE.

Dr. JAMES S. BAILEY read an interesting paper on this subject, of which the following is an abstract. He said that writers differ materially as to what constitutes hypertrophy. The whole subject seems to be but little understood. The adult prostate is usually described as being about the size of a chestnut, and as ranging from four to six drachms in weight. According to Sir Henry Thompson, the average weight may be estimated at from four and a half to four and three-fourths drachms. Dr. Messer, in one hundred dissections of prostates from subjects about 60 years of age, gave four drachms and fifty-seven grains as an average weight.

The measurements as given by Sir Henry Thompson also nearly correspond with the researches of Gross, Hodgson, Senn, and Deschamps: viz., from the base to the apex between 1.3 inches and 1.8 inches, transverse measurement 1.75 inches, thickness .7 inch.

Hypertrophy is common in men advanced to 50 or 60 years of age, though it does not always occur.

The enlargement may be caused by the tissue increasing in its formation, and not by inflammatory action. A prostate weighing seven drachms is considered hypertrophied. This condition is indicated by a fulness of the parts.

The result of enlargement is to obstruct the flow of urine, although in some instances urine is voided involuntarily.

The enlargement of the median portion shortens the curve; when one lateral lobe is unduly enlarged it gives a lateral curve to the course of the urethra, and *vice versa*. The symptoms are not always at once discerned, but a period of several years may intervene before micturition is obstructed.

One of the earliest symptoms is a diminution in the force of the stream of urine, and when an effort is made to expel it a hesitation to flow is experienced. The size of the stream may not be diminished, but the force cannot be much augmented by a strong effort. In some cases additional straining to void urine increases the difficulty. The desire to urinate is increased, and the ordinary satisfaction after emptying the bladder is not experienced. There is also an uneasiness experienced about the rectum and perineum. The urethra also sympathizes, as is manifested by a smarting soreness which extends to the glans penis. When the bladder is distended above the pubes there is dulness on percussion, and a tumor may be felt. In the latter stages the patient is compelled to lean forward and support his head against some object in order to make the urethro-vesical orifice the most dependent portion of the bladder.

The kidneys become embarrassed in their functions, and the urine is backed up through the ureters, and uræmic poisoning is induced, which results fatally.

The urine changes in appearance; it becomes tenacious and stringy from mucous deposits, and is often mixed with pus and the triple phosphates. The odor is fetid and ammoniacal. The chemical reaction is at first neutral, afterwards alkaline, with high specific gravity.

Microscopically may be found blood- and pus-corpuscles and epithelium. Among the crystals are seen the triple phosphates of magnesia and ammonia, besides granular matter and crystals of uric acid and oxalates. Albumen is generally absent, unless introduced by blood or pus, or unless the kidneys are invaded by disease.

The causes are obscure. The following are the most prominent: habitual constipation, horseback-riding, old age, irritation from vesical calculus, stimulating diuretics, intemperance, cold, gout, rheumatism, external violence, use of catheter, chronic diarrhœa, repeated attacks of gonorrhœa, etc.

In youth the prostate becomes enlarged by interstitial plastic effusion, the result of inflammatory action. In age there is an unnatural development of the gland.

The treatment consists in relieving congestion and pain, and in quieting the disposition to pass water. Relieve the bladder by free exit of urine. Hot hip-baths are always acceptable and beneficial in every stage. Opium is also indicated. If these remedies do not relieve, then resort to the catheter without delay.

Dr. Bailey much preferred a silver catheter,—a No. 10, and 14 inches long. Its curve should comprise one-fourth of a circle, measuring from four to five and a half inches in diameter.

The largest instrument the urethra will admit is the best, and less liable to make a false passage.

Reference was made to Dr. Squire's vertebrated prostatic catheter, but, as the doctor had not had experience with it, he referred it to other members of the Society to speak of its merits. Three cases were given to illustrate the paper, as follows:

Case I.—William Smith, æt. 72, machinist, took cold, and had difficulty in urinating. July 7 he failed entirely to micturate, and the catheter was introduced with difficulty. About three pints of dark, bloody urine escaped, which only partially relieved the pain, which he described as being across the loins and shooting down the thighs. It was with difficulty that he could get in or out of bed, or change his position while in the recumbent posture.

His urine remained tinged with dark blood until the 22d of July, when a failure was made to empty his bladder, owing to the eyes of the catheter (which were small) filling with dark decomposed fetid blood.

Dr. Swinburne was then consulted, and by the use of a No. 11 silver catheter with large eyes the thick, bloody urine was evacuated, and then by means of a fountain-syringe attached to the catheter the bladder was washed out alternately with warm and cold water. Upon the next catheterization the urethra seemed shortened more than an inch, and the urine escaped clear, with occasionally a coagulum of blood. About this time he manifested symptoms of uræmic poisoning, was delirious, and had spasms. After washing out the bladder twice each day these symptoms improved for one week; at the expiration of which time his appetite began to fail, and he died August 3.

Necropsy, twenty-four hours after death. Rigor mortis marked. Abdomen: liver somewhat enlarged, edges rounded; ductus communis choledochus occluded; gall-bladder small, containing a few calculi and a drachm of mucus; pancreas thickened and quite hard on section, normal in appearance; spleen healthy; right kidney healthy; left kidney—the supra-renal capsule enlarged to the size of the kidney itself, presenting on section a granular look, and of a pale color, had the appearance of a morbid growth; kidney itself disorganized, with only two or three pyramids remaining; ureters not affected; bladder-walls considerably thickened; half an inch from the mouth of the urethra a longitudinal elevation, an inch or more high, composed of the hypertrophied third lobe of the prostate gland, so situated as to fall as a valve across the mouth of the urethra; it was congested, was soft and rather friable, and contained two or three perforations; prostate enlarged to two inches antero-posterior diameter, and a little more than two inches in the transverse diameter; urethra normal throughout, except at the external orifice, where there was stricture with dense tissue; alimentary canal normal; thorax not examined.

The urine was examined on July 11, and found alkaline, of low specific gravity, containing an abundance of albumen and blood-globules on microscopic examination. July 25, it was again examined, and found strongly alkaline and of ammoniacal odor, with a slight amount of albumen, and depositing triple phosphates and phosphate of lime.

Case II.—J. E., attorney, æt. 68. Health always good, but for the last few years has had some difficulty in micturition. Has never required medical aid until May 7, when he suffered from retention of urine, which was relieved by catheterization. His urine dribbled away from the distended bladder without relief, until May 11, when Dr. Hun was called. His abdomen was tympanitic; he had hiccough, with rapid and feeble pulse. The left leg was cedematous, and mottled up to the middle of the thigh. No induration could be felt in the course of the femoral artery. Through the aid of the catheter one quart of bloody urine was drawn off, followed by an ounce of clear blood, which afforded great relief.

May 12.—No hiccough, and less distress. The catheter was introduced, but no urine followed when withdrawn; the eyes were obstructed by clots of blood. An injection was then used, of warm water, to clear the eyes of the catheter. Up to May 18 the urine was

drawn off three times per day, and was much clearer. The patient seemed bright and better. The œdema of the leg continued, but was soft, and the superficial veins were more marked, and were everywhere visible.

He died May 21.

Necropsy, twenty-four hours after death.—Head not examined. Thoracic and abdominal viscera normal, except the bladder, which was distended with bloody urine and some firm clots of blood. All three lobes of the prostate were much enlarged, and there was some ulceration at the upper and posterior portion of the middle or third lobe, from which the hemorrhage must have taken place.

Case III. has unusual interest, from the circumstance that the subject was the eminent surgeon Dr. Alden March. He had suffered many years from irritable bladder and hypertrophied prostate. Any unusual excitement, such as the performance of a hazardous surgical operation, was sure to increase this disturbance.

More than fifteen years ago, while travelling in Switzerland, he met with an accident while descending Mount Righi,—slipping on a rock and striking the lower part of the abdomen on a projecting point. The injury was severe, and confined him to his room in Lucerne several days, with local symptoms. Before this time he provided himself with a urinal, and, when travelling, kept it at hand night and day. Some time later he met with another accident in running up the steps of a railroad depot: tripping on a step, he struck heavily on the edge of the platform. He suffered very much at the time, and was exceedingly alarmed. Speaking of the accident, he said, "I thought that I had killed myself: that I had ruptured my bladder." He never entirely recovered from this injury.

A few weeks before his death he made the journey to New Orleans to attend a meeting of the American Medical Association. On his way home he travelled night and day continually, which undoubtedly did him much harm, although upon his return he resumed his business and attended to distant calls.

After a fatiguing ride through rain and cold in the country, he returned home quite ill, with fever and a constant desire to void urine. He used cathartics, followed by opium, together with warm baths, which afforded him relief for the time being, and from this attack he partially recovered, and in a few days at the hospital performed a difficult operation.

From this time his health broke down, and his decline was quite apparent; he was not enabled to do much more practice.

On June 6 he attended church, and remained during the service, but was in great distress from the old trouble, and at the close of the service he rushed from his seat to the closet adjoining the lecture-room and partially emptied his bladder. He remarked to a friend, "I never suffered so much pain in all my life; I could not have borne it another minute."

From this time his professional labor ceased, and he sought retirement at the house of his son-in-law, to avoid the annoyance of consultations.

The urine dribbled away an ounce or two at a time, and no effort was made to introduce the catheter until some time after the 6th of June, some eleven days before his death, as he died upon the 17th of the same month, aged 74 years.

When an effort was made to introduce the catheter, it was passed up its whole length without entering the bladder. Blood coagulated in the catheter, no urine passed through it, but some passed external to it, and some followed its withdrawal.

Again, a few days before his death, another effort was made, when the patient was anæsthetized; the catheter was again passed its full length, when it met a firm, resisting body, and again the effort was unsuccessful.

About this time symptoms of uræmic poisoning commenced, and finally hiccough, delirium, and stupor set in, and the great surgeon closed his eyes in death.

Autopsy.—Body well nourished. Palpation of the abdomen revealed the presence of a hard, globular tumor occupying the hypogastrium.

The abdomen was laid open by a crucial incision. The abdominal walls contained a considerable layer of adipose tissue, and the muscles presented a healthy color.

Upon turning back the flap, the bladder was found to be distended, and occupied the hypogastric region from the pubes to the umbilicus, the fundus being a little to the left of the median line. There were some old adhesions between the omental and vesical peritoneum. A trocar was introduced into the anterior portion of the bladder, and rather more than a quart of slightly turbid urine was drawn off. A longitudinal incision having been made along its anterior walls, the internal surface of the bladder was brought into view, and was found to present the reticulated appearance usually met with in cases where obstruction has been offered to the free flow of urine, but there was no abnormal thickening of the walls of the organ. A deep depression existed behind the prostate, owing to the enormous hypertrophy of this gland. A catheter was now introduced through the urethra into the bladder without difficulty. The bladder, with the prostate and a part of the membranous portion of the urethra, was removed from the body in a mass, and the prostatic enlargement was now well shown, and appeared mainly due to hypertrophy of the two lateral lobes.

A catheter was passed from the bladder into the urethra until it emerged externally, and then the incision already made along the anterior wall of the bladder was prolonged downward through the upper wall of the urethra, the catheter serving as a guide for the knife. This having been done, it was found that, although the prostatic portion of the urethra was laid open, yet the membranous portion remained uncut. It was also observed that the connective tissue lying anterior to the prostate gland and neck of the bladder was stained and infiltrated with blood, although there was no evidence of any urinary infiltration. The middle lobe of the prostate was enlarged in such a manner as to form a cul-de-sac just below the vesical orifice of the urethra. The kidneys were rather larger than usual, and contained several cysts filled with a straw-colored fluid, which cysts were situated in the cortical substance and projected beyond the surface of the organ. The pelves of both kidneys were enlarged, but whatever fluid they may have contained escaped unnoticed when the ureters were divided. The renal tissue appeared somewhat congested, but was otherwise normal, and subsequent microscopic examination showed no alteration of the Malpighian bodies or uriniferous tubules. The other abdominal viscera presented nothing abnormal.

The head and thorax were not examined.

Dr. A. VANDERVEER presented pathological specimens of *enlarged prostate*, and gave the history as follows:

W. H. J., æt. 66, good habits, shoemaker, health usually good. December, 1873, noticed some trouble in passing his urine, with a constant desire, and without the ordinary satisfaction after doing so. On the 12th he could not pass his water. The doctor was then consulted. He had but little pain; abdominal tumor well marked, reaching up to the umbilicus. An attempt had been made during the day to pass a gum-elastic catheter, but no urine followed its use. After injecting the urethra with warm oil, Dr. Vanderveer passed, with ease, a No. 12 silver catheter, and drew off about two quarts of urine. The use of the catheter was continued for two weeks, twice daily. After this, and for the next

twelve days, he voided urine with comparative ease. At this time he was attacked with acute bronchitis, and it became necessary to employ the catheter two or three times daily to relieve the bladder.

A thorough tonic course of treatment was adopted, but he gradually sank, and died February 10, 1874. A week previous to death, a trace of albumen could be found in his urine, but no casts.

Post-mortem, twelve hours after death.—Head not examined. Organs of the thorax in a healthy condition; abdominal organs healthy, excepting kidneys and bladder.

The kidneys were very much enlarged; capsules adherent, and glandular structure much congested. The bladder contained a pint of ammoniacal urine; walls thickened, and mucous coat covered with arched and crossed columns of tissue.

The middle lobe of the prostate gland was enlarged in such a manner upward and forward that when the bladder became at all full, this hypertrophied tissue acted as a valve, preventing the exit of urine, and accounting for his inability to empty his bladder.

Dr. VANDERVEER further remarked that he had had better success in relieving retention of urine due to hypertrophied prostate by the use of the olive-pointed catheter, and then referred to an idea gained from Dr. Gourlay, of New York, who had obtained it from Sir Henry Thompson. The gum-elastic catheter should be immersed in warm water first, and the desired curve given it, when it should be immersed in cold water, which would harden it, when it can be introduced, and by the time it meets with the obstruction the point softens and glides over it.

Dr. JAMES MCNAUGHTON thought more depended on the practised hand of the operator than on the instruments; there was a great deal in tact. He expressed his appreciation of Dr. Bailey's paper, and remarked that his views entirely corresponded with his own experience.

THE PRESIDENT spoke of the peculiarity of Dr. Bailey's case and of one other he had seen with Dr. Vedder, of Schenectady, in regard to the bladder filling up with blood which was dark and very fetid; he had never witnessed the like before.

Dr. THOMAS BECKETT mentioned a case having recently come under his observation, of a boy with a full bladder having been kicked by a horse. The next day no urine could be obtained until a stream of water was injected, which had the effect of breaking up the clot which had formed in the bladder.

The discussion was further continued by Dr. S. H. FREEMAN and others, after which the Society adjourned.

REVIEWS AND BOOK NOTICES.

FIFTH ANNUAL REPORT OF THE STATE BOARD OF HEALTH OF MASSACHUSETTS. Boston, January, 1874. Wright & Potter, State Printers.

The Fifth Annual Report of the Massachusetts State Board of Health lies on the table before us, and, while we cannot afford space to analyze it, we have both the will and the ability to commend it. There are without doubt some papers in it which it would require the wisdom of Solomon to discover the usefulness of, but on the whole the volume is a decided success. From it we learn that the expenses of the board for the year have been only \$4347.75.—a sum which we judge is not more than the annual levy laid by the patriot Benjamin upon his custom-house appointees for the purpose of influencing the free and independent voters of the Bay State. Surely the taxpayers cannot complain. Among the

various papers contained in the five hundred and fifty pages of this goodly volume we have been especially attracted by one on school hygiene, by Dr. Fred. Winsor, of Winchester. Circulars containing a number of questions were sent by him to various persons, and replies were received from one hundred and sixty individuals; one hundred and fifteen of whom are physicians, and twenty teachers or school superintendents. As bearing upon the question of "sex in education," we notice that seven-tenths of the correspondents answer that girls are more liable than boys to be injured in health by schooling, and eighty-seven one-hundredths state that this liability greatly increases at puberty. Dr. Winsor further asserts that seven-eighths of the female teachers suffer from the present system, and in a very delicate manner proposes that the school system should be so modified as to allow absence or mitigation of study during menstruation; at least this we believe to be his meaning, for he sacrifices perspicuity to modesty. As the boys would soon probe any such change to the bottom, we can well imagine the sly winks and hints, and even the broad jokes, which Sallie or Katie being "off lessons this week" would give rise to.

A TREATISE ON PHARMACY, designed as a Text-Book for the Student and as a Guide for the Physician and Pharmacist. By EDWARD PARRISH. Fourth Edition, enlarged and thoroughly revised, by THOMAS S. WIEGAND. Philadelphia, H. C. Lea, 1874.

"Parrish's Pharmacy" is a book too well known to need any notice from us. Its aims and its successes, its strivings and its failures, have been seen of all men, and our readers know as well as we do that its chief value is to the pharmacist, and that it appeals almost solely to those members of our profession whose circumstances of practice force them to attend to pharmacy. Mr. Wiegand appears to have done his work carefully and conscientiously. Indeed, he has rewritten much of the first part of the book, and altered and added to other portions of it, so that the size of the volume has been increased about one hundred and fifty pages. To those who need a treatise on pharmacy we can commend the work, as it now stands, as the most complete and satisfactory in the language.

GLEANINGS FROM OUR EXCHANGES.

CINCHONIDINE AS A FEBRIFUGE.—An Indian journal, published in the centre of the tea-districts, has the following observations:

The report of the Madras Commission, dated 15th June, 1868, sums up the result as follows: Most of the medical officers employed in using the alkaloids seem fully impressed with the belief that they are equally or very nearly as efficacious as ordinary quinine, and the mass of information furnished in the tabular reports published proves that such belief is well founded. It has been shown that the total number of fevers treated by the new alkaloids and chemically-pure quinine is 2572, of which only twenty-seven are stated to have failed, and of these no less than eleven were at Labuan. The failures, it will be observed, are but a little in excess of one per cent. of the aggregate number treated, which is certainly a most favorable result, especially when it is known that many of the patients are saturated with malaria and ill fed, as evidenced by their enlarged spleens and emaciated condition. In regard to the relative effects of the three new alkaloids, and with them chemically-pure sulphate of quinine, the evidence derived from their use shows that, with the exception of sulphate of cinchonine, as already stated, they in a remarkable degree so closely resemble each

other in therapeutical and physiological actions as to render distinctive description of little or no practical utility. In reviewing the whole of the operations for testing the therapeutical effects of the cinchona alkaloids, the result confirms generally the favorable opinion expressed by the Commission last year, and likewise conclusively establishes beyond doubt that ordinary sulphate of quinine and sulphate of quinine possess equal febrifuge power; that sulphate of cinchonidine is only slightly less efficacious; and that sulphate of cinchonine, though considerably inferior to the other alkaloids, is, notwithstanding, a valuable remedial agent in fever. . . . Dr. Jackson's experiments extended over no less than 564 cases. "These alkaloids are all," he says, "possessed of highly antiperiodic properties in malarious fever. They were given in the above number of cases without one fatal termination. It is true that the fever, though generally prevalent among the prisoners, was of a very mild type; the fact, however, remains that the average duration of treatment was about six days" (here Dr. Jackson omits to reckon the large numbers cured by single doses), "and such a result can only be accounted for by following the very marked specific effects of the alkaloids administered. I much doubt if such a result could be obtained by the administration of any other of the well-known antiperiodics, always excepting the *facile princeps*, sulphate of quinine itself." Dr. Fogo writes: "In small doses all the alkaloids produce the same therapeutical effects,—that is, as tonics, antiperiodics, and antineuralgics. Hypodermically and internally they have proved successful. In large doses they are all equally energetic, and produce their effects rapidly. They have been successfully used as antiperiodics and febrifuges. We have now three alkaloids in addition to quinine, all of great power. Quinine appears to be the most active and certain in its effects, and from long-established reputation it is not likely to be superseded by any of the other alkaloids, at least not until they become more known. *In many constitutional peculiarities where quinine cannot be borne, these alkaloids will be found good substitutes, and they can all be substituted for each other.*" "In conclusion," says Dr. Bensley, "I beg to say that I look upon quinidine, cinchonine, and cinchonidine as valuable additions to our small stock of antiperiodics, worthy of as much, if not more, confidence than quinine has obtained; one of them, quinidine, having proved itself more successful than quinine, and another, cinchonidine, having secured for itself a position perhaps the most exalted of all, inasmuch as it has afforded us a good febrifuge for cases which from peculiar susceptibilities were opposed to the administration of quinine. So much convinced am I now on this point, that I should feel quite content were I for the future left to deal with all my fever-cases with no other preparation than quinidine and cinchonidine." Dr. Jackson, of Meerut, thus concludes his report: "Of the three alkaloids I am of opinion, and my native doctors are the same, that cinchonidine is by far the most valuable." Dr. Fogo, also at Meerut, observes, "Cinchonidine is in many respects as energetic as the others, and one thing greatly in its favor is that the physiological effects it produces are not so powerfully manifested, and pass off very quickly." Dr. Staples (19th Foot), of Nowshera, says, "It was not found in intermittent fever so efficacious as quinidine, but, like that drug, was a useful tonic in convalescence." Dr. Bensley, of Midnapore, whose therapeutical report treats mainly, and his statistics entirely, of the collective value of the alkaloids, makes the following distinctive remarks of cinchonidine: "It is admirably suited to those cases requiring a tonic or febrifuge, in which at the same time there is a great tendency to diarrhoea, or diarrhoea already exists. Among the cases will be found two in

which quinine produced irritation of the bowels, but cinchonidine was well borne. None the less valuable is it, in consequence of the mildness of its influence on the nervous system, in those cases which, from peculiarity of constitution, are ill able to bear the more powerful alkaloids." Dr. Bensley concludes by saying, "I have used cinchonidine extensively in the fevers of children, on account of its mildness, and because it is less liable to produce head- and bowel-disturbance than other alkaloids. Upwards of thirty of my cases were children varying in age from one to nine years. I have such confidence in it that it is now the only preparation I prescribe for children."—*The Journal of Applied Science*.

THE INFECTION OF SMALLPOX.—Dr. Zuelzer, of Berlin, has just published the results of some experiments which he has made on monkeys (*cercopithecus*) with variolous matter. About a drachm of blood from a severe case of smallpox, and about the same quantity of pus from the mature pustules of another case, were made into small balls with bread-crumbs and given to two monkeys. Both remained well. Ten days later, the hair was cut, without injuring the skin, from a part of the back of one of these monkeys. A piece of charpie charged with variolous pus was laid on the spot, covered with a watch-glass, and secured by strips of adhesive plaster, till the end of three hours, when it was removed and the place washed. No infection followed. Twelve days later, some blood from a severe case of variola was inoculated into several parts of the back and inner surface of one of the thighs of the same animal. The blood used contained a very large number of globular bacteria. On the sixth day after the inoculation, the temperature began to rise, the normal in the rectum being in the morning about 100.4° Fahr., and in the evening 102.5°; and on the seventh day it was 105.5° to 106.4°. The animal lost its appetite, but this returned on the ninth day. Red spots appeared in great abundance on the rump, and single ones on the back, on the inner surface of the thigh, and on the mucous membrane of the fauces; they soon developed into papules, some of which became flat pustules, which soon burst. To test the possibility of conveying infection through the breath, a quantity of desquamated epidermis from smallpox patients, and small pieces of linen impregnated with their blood and pus, were used. These were placed in several small gauze bags in a wooden cage, which was often shaken. A small wire basket filled with the same materials was also given to an animal to play with. It sickened on the fifteenth day, presenting the same symptoms as in the former case. Dr. Zuelzer arrives at the following conclusions: 1. The blood of variolous patients is infectious. 2. Infection does not take place through the digestive apparatus, nor, probably, through the sound skin. 3. Infection takes place through inoculation, and also through the respired air, when this is sufficiently charged with the poison.—*British Medical Journal*.

CHLORAL HYDRATE SUCCESSFULLY USED IN TETANUS.—Dr. Coryllos, of Patras, in Greece, published a case of this kind in the *Allgem. Wiener Med. Zeit.*, No. 2, 1873, and now the same author records two similar cases, one under his own care, and the other treated by Dr. Basilin. The latter case relates to a woman of forty, who had wounded her finger with a splinter, which she removed herself. Tetanus occurred one month after the accident, and she had more than ten general attacks in the twenty-four hours. Sixteen days after the first tetanic symptoms the patient removed from the wound a bit of splinter, the size of a pea, which had been left in it unobserved. The usual narcotics having failed, chloral was tried, and succeeded. Altogether three ounces and a half were taken in twenty days.

In Dr. Coryllos' case a man of forty had his left temple wounded by a pointed piece of reed. Tetanus supervened, and here, again, a portion of the foreign body was removed twelve days after the accident. He had at first fifteen-grain doses of chloral, and improved much upon them. But the tetanus recurred with renewed severity, and the chloral was pushed as far as one hundred and twenty grains per diem. The patient completely recovered, and had taken, in about thirty days, six ounces of chloral.

PUTRID POISONS.—Dr. Kehrer, after detailing (*Archiv für Experiment. Patholog. und Therap.*, 1874) a number of experiments in which various fluids of a putrid nature were injected into animals, gives the following conclusions: 1, the putrid fluid is not soluble in water, but remains in it in a state of suspension; 2, after exposure to heat (boiling) for fifteen to twenty minutes it loses its power; 3, cold has no influence; 4, at the point of injection there arises, according to the size of the dose, more or less diffuse inflammation, followed by acute fever, and frequently gastric catarrh; 5, in rabbits doses of .8 to 1.6 centimetres of putrid fluid frequently cause death; larger doses do so invariably. Occasionally this ensues within one or two days, but sometimes only after suppuration prolonged to fourteen days.

On cutting open animals which have been killed quickly, a strong, putrid odor is very perceptible, particularly at the point of injection.

The heart and vessels are full of thick blood. Local and surrounding tumefaction of the gastro-intestinal mucous membrane is found, together with watery or slimy contents of the intestinal tract.

TEPID BATHS IN THORACIC AFFECTIONS.—Touplet (*Arch. Gén. de Méd.*) gives the results of his observations as to the influence of baths of a temperature of about three [C.] degrees less than that of the body (bains tièdes) upon patients with maladies of the chest, more particularly those affected with phthisis. He placed patients with this disease in baths of the temperature stated, and allowed them to remain immersed for from twenty to forty-five minutes. He found that after the bath the frequency of the pulse and the temperature were less than before, and that this reduction was more marked in those cases in which the frequency of the pulse and the temperature had previously been much above the normal figures. Good effects were also manifested in reducing the night-sweats and nervous excitement, and in increasing the appetite.

THE ACTIVE AGENT OF ERGOT.—Dr. A. Wernich has recently made some investigations in the Berlin Institute, in regard to the active principle of ergot. He finds that the watery extract is far more powerful than either the alcoholic or the ethereal extract. The watery extract, when purified by alcohol and ether, forms a mucous or slimy mass which cannot be dried. The active agent appears to be of the nature of an acid soluble in alcohol when pure, but insoluble when in combination with bases.—*London Lancet*.

DR. BERKART requests us to state that he lately injected weak solutions of carbolic acid through the thoracic parietes into the lung in a very bad case of phthisis at the Tottenham Hospital. The effect produced was most striking. In a few minutes after the operation, which is said to be quite painless, the patient was "sitting up in bed comfortably, eating an egg." In Germany, Koch and Mosler have recently published observations on this subject, but Dr. Berkart informs us that he had suggested the idea as far back as 1872.—*London Lancet*, March 28, 1874.

MISCELLANY.

HYRTL'S RESIGNATION.—On the 16th of March of this year Prof. Hyrtl withdrew from the Chair of Anatomy in the University of Vienna, to the reputation of which he has by his labors contributed so much. Some years ago Hyrtl expressed a desire to free himself from the arduous duties which devolved upon him as professor, and, although he had repeated this desire from time to time, it was not realized until the present year.

Joseph Hyrtl was born in Hungary, in the year 1811, and in his tenth year came to Vienna, where, upon the completion of his studies in the gymnasium, he in 1830 entered the medical department of the University as a student. Even at that time his leaning to anatomical studies was marked, and it served to attract the notice of Joseph Czermak, who was at that time Professor of Physiology. He received his degree of Doctor in Medicine in 1835, and in 1837 was made Professor of Anatomy in Prague, whence, in 1845, he was transferred to the same chair in Vienna. Notwithstanding all the honor and reverence in which he was held by his numerous students, as well as by those who were more advanced in academical rank, Hyrtl was not satisfied with the position which he had at Vienna, and frequently in his lectures alluded to the time he had spent in Prague as the happiest period of his life. His lecture-room was not large enough to accommodate the students who flocked to hear him, and from this he derived a fresh cause of complaint, thinking that the hesitation of the authorities of the University to build a new amphitheatre for the use of the anatomical chair arose from a personal jealousy, and not, as was really the case, from causes beyond their control.

From this and other causes of misunderstanding, for some years past he has taken no part in the proceedings of some of the most prominent medical societies of the Austrian capital.

His withdrawal from his chair was celebrated by deputations from the various societies of the students and medical men, as well as from the Faculty of the University. These visited him at his residence, and expressed their regret and their sense of the loss which the school would suffer by his resignation.

On Monday, the 16th of March, his lecture-room was crowded, as well as the court-yard and passages of the building in which it is situated, and upon his appearance at the table in a coat and without the well-known mantle which he wore at his lecture, Hyrtl was greeted with tumultuous applause, and in a voice broken with emotion he for the last time addressed his class, bidding them adieu, and telling them that his career as an anatomical teacher was over. Hyrtl's voice was scarcely audible, and at the end of his oration, with tears in his eyes, he leaned upon his friend and assistant Friedlowsky, who was quite as much moved as himself. Other orations were made at this time, and in the evening the students had a celebration at one of the large public halls, conducted according to the rules which have for so long a time held sway among them.

Three days later, on the anniversary of Hyrtl's patron saint, Prof. Ritter von Oppolzer—his former teacher, and the old friend of his father—presented him with a wreath of silver laurel leaves, and on the same day a deputation from the municipal authorities of the city offered to him the honorary citizenship of Vienna.

DEAR, BUT NOT GOOD.—The *Times*, of India, has a story how the Dewan of the Guicowar of Baroda, being ill, sent for a doctor, who desired the Dewan to send him next day a bottle of his urine for examination. The doctor used the Hindustani term *karoova* to express urine, and this term was not understood by the patient; but, being desirous of obeying the doctor and sending him what he wanted, the Dewan rummaged the whole town for *karoova*. At last a crafty fellow from Delhi offered to supply it, and sent a bottle, for which he charged fifty rupees. The Dewan tasted the liquid, and pronounced it not nice. However, next morning he sent the bottle to the doctor, saying that it had cost fifty rupees, and a great deal of trouble, and after all, was not nice! The doctor "smole a smile," and then explained the real meaning of *karoova* to the unhappy Dewan.—*Med. Times and Gazette*, February 21.

THE INK OF THE ANCIENTS.—In a letter from Mr. Joseph Ellis, of Brighton, addressed to the *Society of Arts Journal*, he states that in making a solution of shellac with borax in water, and adding a suitable proportion of pure lampblack, an ink is produced which is indestructible by time or chemical agents, and which on drying will produce a polished surface, as with the ink found on Egyptian papyrus. He made ink in the way described, and proved, if not its identity with that of ancient Egypt, yet the correctness of the formula, which was given him by the late Mr. Hackett.—*Druggist's Circular*.

HAY-MITES.—Some time ago a large number of horses died at Nordheim, Germany, from inflammation of the intestines, the true cause not at first being known. At last it was assigned to the hay, in which, upon close examination, an immense number of microscopic animalcula were found. They belonged to the genus *Acarus fenarius*, to which genus the mites living on dry fruit and in cheese also belong. In times of horse-disease it might, therefore, be proper microscopically to examine hay and straw, since even the best fodder, if stored in a damp place, is very likely to be infested by those and other parasites.—*Journal of Applied Chemistry*.

MEDICAL LEGISLATION.—The Kentucky legislature has lately passed a law requiring all who prescribe for the sick either to be regularly graduated by a duly chartered medical college, or else to obtain proper credentials from a State Board of Medical Examiners, of which there is one in each judicial district of the State. Every candidate for practice in North Carolina must pass a satisfactory examination before the Board of Medical Examiners of that State before he can obtain license to practise.

THE *Clinic* reports the death of Dr. H. G. McAllister, of Cincinnati, produced by taking a drachm of chloral and a half-ounce of bromide of potassium. The stupor which ensued was mistaken by his wife for sleep, and the doctor was found by her dead in his bed the next morning.

DR. SHARPEY, the distinguished professor of physiology at University College, is to be placed on the Civil List for a pension of £150 per annum.

ALBERT P. BROWN recommends *pyralin* as an artificial digestant, and gives a method of preparing it.—*American Journal of Pharmacy*, p. 186, 1874, vol. iv.

JOULIN, editor of the *Paris Gazette de Joulin* (obstetrical), died suddenly in his cabinet March 18, 1874, at the age of fifty-three.

IN Paris, thirty-seven streets, according to a Parisian cotemporary, are named after medical men.

GOSSELIN was the successful candidate for the vacant seat of Nélaton in the Paris Academy of Sciences.

NOTES AND QUERIES.

MARSHALLTOWN, IOWA, April 9, 1874.

TO THE EDITOR OF THE PHILADELPHIA MEDICAL TIMES:

MR. EDITOR,—I desire to make some remarks in reply to the editorial which appeared in the *Philadelphia Medical Times*, entitled "The Annual Overflow." The first thing to which I wish to call attention is that the author of "The Annual Overflow" need entertain no fears of the profession not growing in power as well as number; certainly no man who for a moment stopped to reflect upon the discoveries and improvements which are almost daily added to the scientific and the art department of the profession would say, "We fear." The comparison of the medical profession to that of a chain lengthened by links of imperfect workmanship is, I think, rather a poor one. I admit that men miss their calling in some instances, and weak links are interspersed here and there, but those here-and-there weak links may be found throughout the entire chain, save those which time has rusted out. There is little doubt but that fewer weak links will be found in the portion of the chain which has been last constructed than there would be in the portion which was constructed years ago. It is not indisputable that the profession loses influence or lessens with age, but, on the contrary, we have reason to believe it to be gaining. I think if the author of "The Annual Overflow" would take time to call upon some of the boarding-house-keepers and the medical schools of Philadelphia, he would find in most instances that medical students of the present day, as a general rule, are more refined than they were years ago. This does not look as though there were any reason why physicians should lose influence. Are quacks and impostors turned out only from the later graduates? No; the proportion of such to the regular practitioners is no greater than it was fifty years ago. The incident which is given as an example—Mr. Smith—is unfair. This particular gentleman has missed his calling; but because he was a cooper was not the reason why he did not make a doctor; there are plenty of coopers who in three years would make good doctors; there are also plenty of men who have had all the facilities of acquiring a preliminary education and a medical one, who are and ever will be as little competent to practise medicine as was Dr. Smith. Were not some of our best men in the profession mechanics in their early days? In regard to the doctor whose key-note of the English of his prescription was "stummik," I would simply say that that was no reason why he might not have been a competent practitioner of medicine. I have but little doubt that the English was not his native language. Suppose a farmer's son or a mechanic's son is dubbed a medical student after he enters the office of some respectable physician, has he not a right so to be dubbed? for he may yet excel his fellow-student, who has, perhaps, spent most of his time within college walls, but the latter, possibly having little brain, or brain of poor quality, and consequently no judgment or common sense, makes no doctor. Who deserves to be called a medical student?—the farmer's son, who, in the eyes of the author of "The Annual Overflow," is ignorant, and yet becomes distinguished, or the one

who has scarcely seen the sun shine through other than college windows? The farmer's son, I say. Honor to whom honor is due.

Yours, etc.,
M.D.

[We have always felt very sad and depressed concerning human nature and its future when, having made a joke, we have been called upon to explain it. How much sadder and more depressed when, having tried to write simple and plain Saxon concerning a very serious subject, we have failed to make ourselves understood! Certainly, M.D.—if, unlike Dr. Smith, he has not missed his calling—has missed our point. We have nothing to say against capable and studious mechanics, farmers' sons, or hod-carriers rising by three years' hard study into the profession. We distinctly stated that they might do so. We did, and do, most earnestly object to their loafing into it in one year, which is all that our system of education really requires.

We do not care to defend the figures and the literary features of our editorials; they must stand or fall by their own merit. We would not have replied at all to our correspondent had not the importance of the matter demanded some comments. The fact that M.D. states that Dr. Smith is an unfair example, proves the truth of what we have just said in regard to his misunderstanding us. Dr. Smith is, we believe, an unfair example of an average American medical graduate. But a hole large enough to let one big rat through will suffice for the passage of an army of the vermin. And Dr. Smith's case proved our point as conclusively as if we had filled twenty columns of the *Times* with instances. The point was that graduation at a medical college of repute is no guarantee of the possession of even the most modest outfit of medical knowledge. In the last ten years we have probably had as medical pupils nearly four hundred men now graduates, and therefore speak of what we do know, and do not feel disposed to consult boarding-house-keepers and bankers. Men of ability graduate and finally rise to eminence, but God only knows the amount of injury they do whilst they are learning their profession after they graduate. This is the real curse of our American system; not merely that we turn out a large number of ignoramuses, who flounder for a few years, trifling, it may be, with a few score of lives, and then fall out of sight, but that so many of our good practitioners become such at the expense of those wretches who fall in their way during the early years of their practice, and that many even of these good practitioners are ignorant of the outer knowledge of the profession,—totally unfit to guide their respective communities in regard to those matters, such as hygiene, which ought to be settled by physicians, and for direction in which the laity looks to the profession.

We have not space here for further words about deficiencies of which we had thought everybody knew. *Ex uno omnes disce*. Very many graduates of medicine from our first colleges have no practical knowledge of physical diagnosis.—Eds. P. M. T.]

OFFICIAL LIST

OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U.S. ARMY, FROM APRIL 21, 1874, TO APRIL 27, 1874, INCLUSIVE.

- BAILY, J. C., SURGEON.—Assigned to duty at Frankfort, Kentucky. S. O. 61, Department of the South, April 20, 1874.
- GARDNER, WILLIAM H., ASSISTANT-SURGEON.—Assigned to duty as Post Surgeon at Fort Union, N. M. S. O. 32, District of New Mexico, April 14, 1874.
- MIDDLETON, P., ASSISTANT-SURGEON.—When relieved by Surgeon Baily, to comply with S. O. 78, c. s., War Department. S. O. 61, c. s., Department of the South.
- LIPPINCOTT, H., ASSISTANT-SURGEON.—Assigned to duty as Post Surgeon at Fort Whipple, A. T. S. O. 35, Department of Arizona, April 9, 1874.
- DE WITT, C., ASSISTANT-SURGEON.—Assigned to duty at Humboldt, Tennessee. S. O. 61, c. s., Department of the South.
- GIRARD, ALFRED C., ASSISTANT-SURGEON.—Relieved from duty in Department of the South, and assigned to duty at the United States Military Academy, West Point, New York; so much of S. O. 79, c. s., A. G. O., as grants him four months' sick leave, having been revoked. S. O. 90, A. G. O., April 25, 1874.
- GIRARD, J. B., ASSISTANT-SURGEON.—Assigned to duty as Post Surgeon at Camp Lowell, A. T. S. O. 35, c. s., Department of Arizona.
- POPE, B. F., ASSISTANT-SURGEON.—When relieved by Assistant-Surgeon De Witt, to comply with S. O. 78, c. s., War Department. S. O. 61, c. s., Department of the South.
- FITZGERALD, J. A., ASSISTANT-SURGEON.—Relieved from duty at the United States Military Academy, and to report in person to the Commanding Officer, Department of the Columbia, for assignment. S. O. 90, c. s., A. G. O.
- MOFFATT, P., ASSISTANT-SURGEON.—Assigned to duty at Fort Garland, C. T. S. O. 32, c. s., District of New Mexico.

SATURDAY, MAY 9, 1874.

ORIGINAL LECTURES.

CLINICAL LECTURE.

OUR EYES—HOW TO TAKE CARE OF THEM.

Abstract of a Lecture delivered at the University of Pennsylvania,

BY WM. F. NORRIS, M.D.,

Clinical Professor of Ophthalmology.

Reported by S. D. RISLEY, M.D.

GENTLEMEN,—I purpose to-day occupying the remainder of the hour by directing your attention to an important branch of hygiene: the proper care of our eyes,—how we may best prevent disease of these important organs and prolong their period of usefulness. I need scarcely tell you that our eyes are the principal portals to the mind; that through their agency we acquire most of our ideas. Neither need I dwell upon their importance in the pursuit of our daily avocations, or the inestimable calamity caused by total loss of sight. An old German proverb tells us that “a blind man is a poor man;” and, although the self-evident truth of this statement comes home to us all, nevertheless the minor degrees of impairment of vision which diminish the capacity of the individual for continued work, or exclude him altogether from many profitable occupations, have not met with that attention, either from the mass of the profession or from the public, which they really deserve. In many cases these visual defects are acquired, being the result of improper use of the eyes; in others, they are caused by certain congenital anomalies in the organ itself.

My purpose to-day, gentlemen, is to give you, so far as the time will admit, some hygienic rules for the prevention of the first, and also the means for obviating the difficulties arising from the second.

In order to comprehend fully what I shall say, it may be necessary to recall to your minds certain facts in the physiology of vision. The eye may be considered, optically, as a dark chamber, with refracting media, the most important of which are the cornea and the crystalline lens, and with a receptive screen—the retina. As in the photographic camera, when the receptive screen is placed at the principal focus of its lens, parallel rays, or those from an infinite distance, are brought to a focus upon the screen, giving a distinct but inverted image of the object, so, in the emmetropic or optically normal eye, rays of light emanating from distant objects are, without effort, focused upon the rods and cones of the retina, giving, as in the case of the camera, a clear but inverted image of the object.

I say focused upon the *rods and cones* of the retina, for it is only here they can be perceived, it being the only perceptive layer of the retina; the other layers serve either to augment the intensity of the perception or to assist in conveying the impression to the central nervous system. If, in the camera, the receptive screen be placed either within

or outside the principal focus of its lens, we will have no longer a distinct image of the object, but a disk of diffused light; and, in order to obtain a clear picture again, we must increase or diminish its power of refraction. If the screen be placed nearer to the lens than its principal focus, we must increase its power of refraction by adding to it an additional *convex* lens; or, if outside the principal focus, diminish its refractive power by the addition of a suitable *concave* lens.

All objects nearer than infinity no longer send parallel, but divergent, rays; so that the screen remaining at the principal focus of the camera lens, the object being placed nearer than infinity, we would no longer have a distinct image pictured upon the screen, but a disk of diffused light again; and, in order to secure an accurate image, must either move the screen farther from the lens than its principal focus, or, as in the other case, increase its power of refraction by an additional lens, which will so bend even divergent rays as to unite them at the principal focus.

The eye, gentlemen, like the camera, is subject, also, to this law of conjugate foci; but the retina cannot change its position as the object approaches it. The eye, however, does possess the power of increasing the convexity of its lens, and thereby its refractive power, so as still to focus rays of light from near objects, or divergent rays, upon the rods and cones. This is known as the power of accommodation of the eye, and is dependent upon the ciliary muscle. The eyes being simultaneously directed to the observed object, the nervous influence passes along the third pair to the ciliary muscle, causing it to contract, thereby relaxing the suspensory ligament of the lens. The elastic lens is now allowed to expand, increasing its convexity, and thus its power for bending rays of light.

This power of accommodation has its limit, which differs at different periods of life. Thus, in youth it ranges in the emmetropic eye from infinity up to three inches from the eye. This near point retreats from the eye with increasing years; gradually, however, so that it is not noticed usually until about the fortieth year. Indeed, for ordinary employments, the recedence of the near point is not even then noticed. If a fine silk thread, stretched taught, be held at the nearest point of distinct vision, you will find that at the tenth year this will be at $2\frac{3}{4}$ ", at the twentieth year at $3\frac{3}{4}$ ", at the thirtieth at 5", at the fortieth at 8",—at which time the phenomena of old sight (presbyopia) begin to be manifested. At first only by artificial light, or when reading unusually fine print, it is noticed that vision is somewhat defective. Later it becomes impossible to obtain a distinct view of ordinarily fine print without holding it inconveniently distant from the eye, or by supplementing the accommodation by convex glasses. This diminution of the accommodation is not so much due to a diminution of the power of the ciliary muscle as to the hardening and loss of elasticity of the lens itself. You may readily convince yourselves of this by removing the lens from any child's cadaver, and comparing it with that of

an adult over forty. On examination, you will see that the child's lens is colorless and soft, while that of the adult has become hard and its nucleus is of a straw-yellow color. With advancing years, then, the lens becomes less elastic, and more firm in its structure; so that, though the suspensory ligament may be relaxed, it refuses to expand as in youth, and the individual is said to be old-sighted, or presbyopic, and must henceforth aid his sluggish lens by spectacles. For this purpose convex spherical lenses are usually placed before the eye, and of sufficient strength to bring the near point up to a comfortable distance from the eye. The numbers, gentlemen, affixed to these glasses, represent in inches the principal focal distance of the lens. Thus, a glass which will give a clearly-defined image of the sun one inch behind its centre is taken as the standard ($\frac{1}{1}$); a lens which gives the picture at two inches has only half this refractive power, and is denominated $\frac{1}{2}$; one which gives it at eight inches, $\frac{1}{8}$, etc. A point at this distance from the lens is called its principal focus; that is to say, the point at which the lens is able to focus parallel rays of light. Suppose, however, that our source of light, instead of being at an infinite distance, is near to us, we will find that the focal point has receded from the lens, and just where its new focal point will be may be determined by subtracting the distance of the object from the lens from the principal focus of the lens. Suppose, for instance, that we have a convex lens whose principal focus is ten inches ($\frac{1}{10}$), and we wish to obtain with it a distinct image of a candle placed twenty inches in front of it, where shall we place our screen in order to get a distinct image of it? $\frac{1}{10} - \frac{1}{20} = \frac{1}{20}$, and we will, therefore, obtain a focus for the rays emitted by the candle at 20" behind the lens.

There are also concave lenses, which cause the dispersion of parallel rays. The focus of such a lens is to be found by following the diverging rays back towards the source of light, and they are rated in the same way as convex lenses: *e.g.*, a concave glass of ten inches focus will render parallel rays as divergent as though they had come from a point ten inches in front of it. The strength of such a lens may readily be determined, also, by neutralizing it by a corresponding convex glass. If a weak convex or concave glass be moved rapidly before the eye, objects seen through it will appear to dance. If, however, such a concave glass is exactly neutralized by the apposition of a convex lens of equal power, objects seen through the combination, when moved rapidly in front of the eye, would seem stationary, as they do with a sheet of plate-glass under similar circumstances.

If I have made plain to you these laws,—viz., that the focus for parallel rays is always the same for the same glass, and that, in case of convex lenses, an approach of the object to the lens will cause a corresponding retreat of the image from its optical centre,—it will be obvious to you that, theoretically, an emmetropic eye could be focused for near objects either by lengthening its axis or by adding to it a suitable convex lens. From these considerations you will also gain an accurate idea of the change

which must take place in the crystalline lens in the act of accommodation.

That the crystalline lens does, in fact, become more convex in accommodating for near objects, may be proved by the change in the relations of the images reflected from its surface,—as in the so-called catoptric test,—and has been demonstrated by this means. You will see the same principle illustrated by looking into the brightly-silvered garden globes of different sizes. As your reflected image varies in size with that of the globe, so as the convexity of the crystalline lens increases or diminishes with accommodation the image will be smaller or larger, at the same time changing its relative position. As I have already told you, this power of accommodation is resident in the ciliary muscle and the lens itself. This will be rendered clearer, perhaps, by reference to the diagram which I show you (see figure), in which one-half of the lens is represented in the act of accommodation. You will observe that the ciliary muscle, acting from its fixed point at the corneo-scleral junction, is swollen and shortened in the act of contraction, by which act the suspensory ligament is relaxed; and you see the elastic lens has become thicker or more convex, and its radius of curvature much shorter, than that of the other half, which is represented as being in a state of rest.

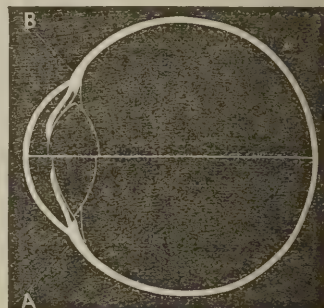


DIAGRAM SHOWING THE CHANGE OF LENS AND CILIARY MUSCLE IN ACCOMMODATION.—*a*, Ciliary muscle in state of rest; *b*, in contraction.

Another point of considerable clinical importance is the fact that our perception for objects has its limits. Objects, therefore, must have a determined size to be seen at a given distance. Observation has determined the fact that printed letters presenting an angle of five minutes can readily be discerned by a normal eye. Suppose our eye placed at the centre of a wheel the radius of which is twenty feet, it will be able to recognize any object on the circumference of the wheel which subtends an angle of five minutes. Snellen has utilized this fact for clinical purposes in the construction of letters which, for the distances at which they are intended to be seen, subtend an angle of five minutes, and the individual strokes of each letter of one minute.

An emmetropic or optically normal eye will, if there be no opacity of its refracting media or disease of its inner coats, be able to recognize Snellen No. XX. readily at twenty feet, and will by an effort of accommodation be able to read No. I. at one foot, and the intermediate type at corresponding distances.

There are many persons, however, in every community, whose eyes have not this optically perfect construction (emmetropia), and all such optically imperfect eyes are designated as ametropic.

We saw that the emmetropic eye was so constructed that parallel rays of light were without effort

focused upon the perceptive layer of the retina. Now, we may have two fundamental departures from the normal type, called, respectively, *hypermetropia* and *myopia*. In the first, the antero-posterior axis of the eye is too short in comparison with its refractive power,—i.e., the retina is placed within the principal focus of the refractive media; consequently, the rays of light are intercepted before reaching the focal point, so that instead of a clearly-defined image upon the rods and cones there is a disk of diffused light, or a blurred and indistinct perception of the object. In the second condition, or myopia, refractive power of the eye is too great for its length of axis; consequently, the rays of light are focused in front of the retina, cross over, and, on reaching the rods and cones, give again a circle of diffusive, and consequently indistinct, vision. Such eyes are near-sighted, for they are able only to focus upon the retina rays of light which enter as *diverging* rays, while the first, or hypermetropic eye, in a state of rest, can focus only *converging* rays.

In myopia, in order to correct the optical defect and thus secure to the patient distant vision, we must place before his eye a glass which will make parallel rays of light thus divergent,—viz., a concave lens, the strength of the glass depending upon the degree of myopia: e.g., if a person is able to read No. I. of Snellen types at 12", which is the farthest point he can see it distinctly, and is unable to see No. II. at 24", and can see No. II. distinctly only when approached to 12", he has probably a myopia of $\frac{1}{12}$, which will be corrected for parallel rays or distant vision by a concave glass of twelve inches focus. With this glass, if his eye be otherwise healthy, he will be able to read Snellen XX. at twenty feet.

To the too short or hypermetropic eye, however, all objects must be indistinct, since in a state of rest it can focus on its retina only converging rays, and most objects in nature send to us either parallel or divergent rays; therefore, such an eye at rest must, in order to see objects distinctly, be aided by some optical contrivance which will cause even parallel rays to enter it as converging rays. We have seen, however, that the accommodation furnishes the emmetropic eye with the power of adding to itself an additional convex lens, and so focusing even diverging rays upon the retina. This power, indeed, is essential in all use of the emmetropic eye for near vision. In hypermetropia, however, it becomes necessary, even for distant vision, to use the accommodation if objects are to be seen distinctly. Such a person, you will observe, gentlemen, starts in life with a deficit which he is forced to make good by an effort of accommodation. Hence, in estimating the amount of nerve and muscular force required by him in accommodating for near objects, we must add this deficit to the amount employed by an emmetropic eye. This extra *load*, as it were, soon becomes an irksome one, and to its possessor proves one of the greatest evils of life. If able by his accommodation to overcome the anomaly and thus secure distinct vision, it is only to be tormented by ciliary neuralgia, injected and burning or itching eyelids, which may result in inflammatory conditions. With advancing years, as

his lens becomes more dense and less elastic, he finds himself unable to secure by the utmost effort distinct vision, and so resigns himself to his fate, being content to get his impressions of surrounding objects from a misty and indistinct image.

These difficulties, painful and serious as they are, may be entirely obviated by the use of convex spectacles,—glasses of such strength as shall correct the optical defect.

Thus, gentlemen, I have called your attention to three varieties of eyes: the *emmetropic* or optically normal eye, which in a state of rest is able to focus parallel rays of light upon the retina; the *hypermetropic* or "long-sighted" eye, which is too short in its antero-posterior axis, so that parallel rays are intercepted before their focal point; and the *myopic* or short-sighted eye, which is too long in its antero-posterior axis, allowing the rays to reach their focal point and cross over before reaching the retina.

In my next lecture I purpose to show you how many of us, starting in life with normal eyes, by neglect of proper hygienic measures, and by improper use of them, gradually acquire defects of sight which become serious hindrances to us in the pursuit of our ordinary occupations; and, further, how we may best guard against and prevent the development of such abnormal conditions.

ORIGINAL COMMUNICATIONS.

OBSERVATIONS ON THE NORMAL PULSE, RESPIRATION, AND TEMPERATURE OF PUERPERAL WOMEN.

BY G. WILDS LINN, M.D.,

Late Resident Physician to the Philadelphia Hospital.

THE importance of noting variations in temperature in physiological and pathological conditions or processes is now so well recognized, that any arguments adduced to prove it would be superfluous. The pulse and respiration have been noted from the earliest ages in the history of medicine, as giving information invaluable to the physician; and that a new factor has entered into the study of disease, affording such constant and certain evidence of its progress or decline, is reason for gratulation. The thermometer, as a means of physical diagnosis, is second to none of those which have lifted the science of medicine far above the plane it occupied but a score of years ago.

It was with such a belief in its revelations and predictions that I began and prosecuted a series of observations upon the temperature of lying-in women. These were made in the obstetrical wards of the Philadelphia Hospital, and extended over a period of three months, beginning in July and ending in October. The wards in which they were made had been unoccupied for months, had been thoroughly cleansed, and, being situated in a building entirely separated from the surgical wards, were removed from all danger of infection by them. They were also in the fourth story of the building, abundantly supplied with light, and well ventilated.

Hence it was that the circumstances under which these observations were made were of the most favorable character, and it is a noteworthy fact that there was not a single case of puerperal fever in the wards during the term, although there were the usual number of instrumental cases of delivery. In a hospital of such size, and in obstetrical wards where three hundred patients are confined annually, possibly no more auspicious time could have been selected for procuring such trustworthy results, my object being to ascertain the *normal* temperature, pulse, and respiration of the lying-in women.

To secure this result I have rejected all cases in which delivery was effected by means of instruments, those in which there was post-partum hemorrhage, and patients suffering from any intercurrent disease, as diarrhœa, malaria, phthisis, etc. I have rejected, also, all those who did not suckle their children. Our patients generally are strong, healthy women, averaging about twenty-four years of age, the greater part of them being domestics. I have selected only such cases, and from these excluded also, besides the above classes, all who had fissured nipples, or any other local lesion which I thought might mar the accuracy of my observations.

Adopting such a rigid course of pruning, I found my cases, over fifty in number, on which I had taken observations, diminishing until I had but twenty-four which I could call *positively normal*, or those into which no pathological element whatever might be found to enter. I should also say that in every case I made the observations myself. Those who have had any experience in hospital practice can realize how unsafe it is to trust to ward nurses for accurate information on questions of such nature in single instances; much more so, then, when a long period of time is necessary to complete an investigation.

Fahrenheit's thermometers were used, and the temperature in all cases taken in the axilla, ten minutes being allowed for each observation. To insure accuracy, which is a *sine qua non* in observations of this character, my thermometers were all compared with a standard thermometer, the value of each being carefully noted.

The pulse, respiration, and temperature were each taken twice daily, at 9 A.M. and 8 P.M., two and a half hours after the morning and evening meals. In this manner the increase in temperature due to digestion was avoided; also the minimum daily temperature, which, according to Lichtenfels and Frölich, occurs between 6 and 8 o'clock A.M. and between 10 P.M. and 1 A.M.; also the maximum daily temperature, which, according to the same authorities, is found between 4 and 5 o'clock P.M. My observations in every case were begun on the morning or evening immediately following delivery, and continued for nine days, it being customary in the hospital for patients to be kept in bed for that period after labor. Every possible attention was observed which it was thought might conduce to the welfare of the patients. No exertion whatever, on their part, was permitted after delivery. Each patient was allowed to remain an hour after parturition upon the "lying-in bed," which, resting on castors, was then wheeled into the ward and alongside the bed intended for her, and

she was then carefully lifted into it. Napkins were changed frequently each day, and a solution containing the permanganate of potassium freely used. No alcoholic stimulants were allowed. The diet consisted of milk, eggs, beef-tea, and mutton, with coffee or tea, and bread, toasted, or plain with butter.

I have arranged all my results in tabular form, so as to show at a glance (together with the age and pregnancy)—

1. The pulse, respiration, and temperature of each patient for the morning and evening of each day;
- 2, the average morning pulse, respiration, and temperature of each patient;
- 3, the average evening pulse, respiration, and temperature of each patient;
- 4, the average daily pulse, respiration, and temperature of each patient;
- 5, the average morning pulse, respiration, and temperature of the whole number for each day;
- 6, the average evening pulse, respiration, and temperature of the whole number for each day;
- 7, the average daily pulse, respiration, and temperature of the whole number for each day;
- 8, the average morning pulse, respiration, and temperature of the whole number for the whole time;
- 9, the average evening pulse, respiration, and temperature of the whole number for the whole time;
- 10, the average daily pulse, respiration, and temperature of the whole number for the whole time.

I had hoped to present with these tables a general review of all the published observations of a similar nature which have been made abroad. These are, however, few in number, and the major part of them are untranslated, and found only on the shelves of the Continental libraries. As I expect to have access to these soon, I shall then be able to review the whole subject satisfactorily. I have presented my tables complete, for I am sure that after they have been examined my deductions can be much more readily comprehended. I was anxious, too, that every step I had taken in reaching my conclusions should be perfectly understood, for it will strike the mind of the reader that some of them do not support the general if not universal opinion of the profession in regard to the so-called "milk fever" attending the establishment of the milk secretion, which occurs generally from thirty-six to seventy-two hours after delivery, and is supposed to give rise to an increase in temperature of one, two, or even more degrees.

The belief that such a rise in temperature does occur has been accepted by medical men for centuries: so thoroughly, indeed, has the mind of the profession been imbued with this idea that it would be deemed rash in any one to question it, unless he were supported by an array of facts which could not be ignored.

Attending this milk fever, and even more marked than the rise in temperature, has been a supposed increase in the frequency of the pulse, so that a pulse of 90 or 100 per minute is generally considered as indicative of nothing more than a process altogether physiological.

I have selected twelve cases complicated by fissured nipples. These I have tabulated also as the others, and the results from them I have placed alongside those obtained from normal cases. An

3. That the number of respirations is increased if the statement of physiologists be received, that the

The following tables contain the records of the original observations upon which the above conclusions are founded. On account of the importance of the subject, they are here appended in full, in order that the grounds of the conclusions reached may be examined by any one sufficiently interested to perform the labor of so doing.

TABLE I.

Pulse. Resp. Temp.

Average morning	Pulse,	Respiration,	and Temperature of the whole number.....
" evening	"	"	"
" daily	"	"	"

TABLE III.

	Pulse.	Resp.	Temp.
Average morning Pulse, Respiration, and Temperature of the whole number.....	81	26	99.9
“ evening “ “ “ “	80	26	100.5
“ daily “ “ “ “ “	80	26	100.2

	Pulse.	Resp.	Temp.
Average Pulse, Respiration, and Temperature of the entire number of Cases for the time observed, deduced from Table III....	80	26	100.2

TRANSLATIONS.

PULSATION OF THE SUBCLAVIAN AS A SIGN OF SUPERIOR DILATATION OF THE AORTA.—Contrary to what is observed under normal conditions, there may be noticed in certain cardiac affections peculiar pulsations in the carotid region, and at the base of the neck. That these pulsations originate in the passage of the blood-current through a large artery—the subclavian—may be shown in two ways: first, by placing the finger back of and below the tubercle of the scalenus anticus muscle, when this artery will not be found in its usual position; then by making compression over the seat of pulsation, when the pulse at the wrist is affected. If on making this compression over the misplaced subclavian the arterial walls are lightly impressed by the finger, a double vibratory tremor may be remarked. The first and most intense part of this is systolic, and is evidently produced by the rapid centrifugal passage of the blood-current. The second, of variable intensity, is caused by the return of the blood towards the heart; it is sometimes wanting.

Auscultation over the seat of pulsation demonstrates the existence of a double blowing murmur, evidently connected with the vibratory tremor above mentioned. The second part of this murmur is wanting when the second part of the tremor is absent.

In a number of autopsies of such cases, the existence of aneurism affecting the superior wall of the aorta was ascertained. In these cases the subclavian is found displaced, and overlapping to a certain degree the omohyoid muscle. It is at first uncovered behind the clavicle, and then becomes more superficial. Finally, it is sinuous,—that is, too long for its channel.

The double tremor and murmur appear to be independent of any abnormal condition of the aortic orifice. The fact appears to be that the walls of the dilatation, true or aneurismal, having lost their elasticity, allow themselves to become distended under the influence of the ventricular wave at the same time as the arterial system. But, owing to the impulsive force of the heart having been exhausted by the inertia of these walls, the arterial tension is lessened.

The diastolic reflux of a part of the contained blood results of necessity from this unequal subdivision of the blood-tension. It is the centripetal reflux which determines the diastolic murmur. The displacement of the subclavian is evidently due to elevation of the superior wall of the aorta. It is shown in the shortening of the course of the carotid and other vessels given off, causing them to become sinuous, and thus to give rise to the pulsations noted. If the aortic dilatation is equal over all parts whence the great vessels are given off, the various phenomena alluded to will be observed equally on both sides of the neck. If, on the contrary, it is greater near the aortic origin, or on the other extreme of the arch, pulsation, etc., will only be observed on the affected side.

We have here, then, a valuable aid in the diagnosis and prognosis of superior aortic aneurism. For not only may the extent and position of the enlargement be ascertained approximately, but if in the progress of the case the vibration and murmur should disappear we may hope that the aneurismal pouch is being filled with clots.—*Archives Gén.* (by A. Fauvre). A. V. H.

SECTION OF THE BUCCAL NERVE THROUGH THE MOUTH.—In a note read before the Académie de Médecine (*Archives Gén.*, Feb. 1874), Dr. Panas, after a résumé of previous operations, gives the following as performed by himself:

The patient, unanæsthetized, being seated in a good

light, the head is firmly fixed by an assistant, who also keeps the jaws separated by placing his fingers, properly protected, between them on the sound side. On the other side the commissure of the lips is held back by an instrument so that a good view is obtained of the inner side of the cheek, and the operator, using his finger as a guide, makes an incision parallel to the edge of the maxilla, beginning on a level with the middle of the superior molar, and extending to a point opposite the crown of the last inferior molar. This incision, which is from two-thirds of an inch to an inch in length, only extends through the mucous membrane, and exposes the deep fibres of the buccinator without loss of blood. The operation is then continued by short and careful strokes of the knife, or by curved scissors; the only vessels liable to be cut being the buccal nerve and the artery, which lies in juxtaposition to the nerve, and which may be readily closed by torsion. The buccinator being divided, the nerve may be searched for by means of a strabismus hook. It may in general be readily found at the bottom of the wound and in connection with the buccal artery; when hooked on the instrument it causes an acute and characteristic paroxysm of pain, and, being identified, may be excised as desired.

The advantages of the operation, according to Dr. P., may be briefly stated to be comprised in the absence of danger from wounding the facial artery or nerve or the duct of Steno. Even should this duct be wounded, the inconvenience of salivary fistula is avoided, since the opening would be within the mouth.

In the case operated upon in this manner by Dr. P., but little pain followed the operation. Cicatrization of the wound occurred on the sixth day, and the neuralgia, which had formerly been very severe, disappeared entirely. A. V. H.

INFLUENCE OF PREGNANCY UPON DISEASES OF THE HEART.—In a clinical lecture reported in *L'Union Médicale*, January 27, 1874, M. Sée offers the following conclusions on this subject. As regards the prognosis of heart-diseases in connection with pregnancy, much depends on the lesion which may exist in any given case.

From this point of view M. Sée divides heart-diseases into several categories. *Aortic narrowing* is an affection of old age, and out of question in these cases. *Aortic insufficiency* is not uncommon among young girls and women. This is not, however, dangerous in pregnancy when uncomplicated by functional troubles, and M. Sée cites six cases coming under his notice, in which a number of pregnancies had terminated under these circumstances with entire safety to mother and child. He concludes it unnecessary to interdict marriage under similar circumstances.

Mitral affections are much more grave, but these differ considerably as to the prognosis they give rise to. In *mitral narrowing*, provided there is no pulmonary congestion, no cedema of the inferior members, no cerebral emboli,—if, in a word, the disease is characterized only by a presystolic bellows-murmur, although this may be most intense, and even accompanied by whining (pialement),—in this case the narrowing cannot exercise any evil influence on the course of pregnancy. M. Sée gives here several interesting cases in illustration, and concludes as follows:

"Although there is nothing to interdict marriage in cases of mitral narrowing, yet it is quite different in *mitral insufficiency*; above all when there are congestive accidents on the part of the lungs.

"In such cases it is necessary to advise against marriage, since pregnancy would always be dangerous."

A. V. H.

PHILADELPHIA MEDICAL TIMES.

A WEEKLY JOURNAL OF

MEDICAL AND SURGICAL SCIENCE.

The Philadelphia Medical Times is an independent journal, devoted to no ends or interests whatever but those common to all who cultivate the science of medicine. Its columns are open to all those who wish to express their views on any subject coming within its legitimate sphere.

We invite contributions, reports of cases, notes and queries, medical news, and whatever may tend to increase the value of our pages.

All communications must bear the name of the sender (whether the name is to be published or not), and should be addressed to Editor Philadelphia Medical Times, care of the Publishers.

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SATURDAY, MAY 9, 1874.

EDITORIAL.

THE CENTENNIAL.

THE papers teem with editorials, telegrams, extracts, concerning that absorbing topic the Centennial. Congress and the Centennial, Councils and the Centennial, the ladies, the workingmen, the business men and the Centennial, are the order of the day; and to these we would add a thought concerning that interesting being, the busy practitioner, and the Centennial. What are his relations to it, and its to him? Will he be better for it, or worse? Will he have much to do with it, indeed? For the busy practitioner is a being on whom the agitations of the day make little impression. Thrones crumble, republics are convulsed, epidemics rage, conflagrations devastate, yet the busy practitioner pursues the even tenor of his way. Gala-days and days of rest find him alike jogging on his rounds. The revolutions which stir his soul are those of medical science. If politics engage him, he ceases to be the busy practitioner, and becomes a non-descript; yet he takes a thoughtful interest in everything that concerns his world. The theme that interests his clients awakes an answering interest in him. As he reads, if he gets the chance, his daily paper, he must be asking himself to-day what is the Centennial to him. We answer for him, much and little. He helps to pay for it; perchance it diverts also the capital which would find its truest uses in settling his long-standing claims. Yet it bids fair to stimulate business, and other claims may be met more promptly. The Centennial will crowd the city

in the sickly season of the year, and busier will be those busy practitioners who know the entrances to our large hotels, whilst the less fortunate may glean a few fees from the comparatively barren fields of the boarding-houses. The long sunny stretch to George's Hill will yield its quota of over-heated foreigners; the long round of sight-seeing, of over-taxed and over-wearied bodies and minds; and if the whilom exotic, the American drink, blossom more fully in native soil, then may we look for multitudinous mania-a-potu and teeming delirium tremens. But we wot that the average busy practitioner will long for none of these things, the public opinion notwithstanding. His soul rather thirsts for the quiet summer, when the great houses are deserted, and children's excursions keep the poor off the sick-list, when he can by snatching a week from the fifty-two be happy in the country or at the sea-side, and forget the remorseless year, till it seizes him again and chains him in the treadmill of his daily rounds.

But we must make our show in the Centennial. We cannot exhibit to the world our truest work, our successes or our failures; but the inventions we claim as ours, the mechanical appliances, the instruments to facilitate research,—these, our instrument-makers, inspired by us, will set before the visitors. Perchance the College of Physicians might be moved to place beneath the great Memorial dome that marvel of art, the plaster model of the Siamese Twins from the waist upwards, that memento of an unrivalled duplicity which has cost the College so dear. What portion of the globe of Europe, Asia, or Africa could produce the equal of that unique, mysterious figure?

The inventive American mind, before which impossibilities are but incentives to performance, spurred by the coming Centennial, could devise, if it willed, in the two years before it, new apparatus, new remedies, new operations enough to astonish Europe. It could fill the great Memorial building with new medical literature—Heaven help the readers!—and call up new diseases from the vasty deep, and diagnose and treat them for the edification of a shuddering world. But enough; let us all be up and doing, and perchance on some sultry July day of 1876 we may see the jaded, fly-bitten horse of the busy practitioner slowly jogging towards George's Hill to catch a chance hour or two for its owner to wander amid the curiosities that America has gathered together to play with for a little, till the toys are old and broken and the child of a hundred summers is tired of play.

THE IDENTIFICATION OF THE REMAINS OF DR. LIVINGSTONE.

THE hold that the superstition of burial has upon the English race, and the probabilities cremation has of becoming popular, seem to us to be plainly outlined in the excitement in regard to the recovery of the body of the great African traveller and philanthropist. To us the one important point has been the recovery of his diaries and other papers and records. Yet we hear very little about this, although the newspaper press has teemed with particulars concerning the body. When the latter reached England, the question of its identification was of course an important one. As the readers of "Livingstone's Travels" will remember, some years ago he was seized by an infuriated dying lion, and his left arm very much lacerated, the bone being crushed to splinters: from these wounds he recovered with an ununited fracture. Dr. Livingstone had during life consulted very freely Sir William Fergusson concerning this arm, and to him were intrusted the examination and identification of the body. In his report he says, *inter alia*:

"From what I have seen I am much impressed with the ingenious manner in which those who have contrived to secure that the body should be carried through the long distance from where Livingstone died until it could reach a place where transit was comparatively easy, accomplished their task. The lower limbs were so severed from the trunk that the length of the bulk of package was reduced to a little over four feet. The soft tissues seem to have been removed to a great extent from the bones, and these latter were so disposed that by doubling and otherwise the shortening was accomplished. The abdominal viscera were absent, and so were those of the chest, including, of course, heart and lungs. There had been made a large opening in front of the abdomen, and through that the native operators had ingeniously contrived to remove the contents of the chest as well as of the abdomen. The skin over chest, sternum, and ribs had been untouched.

"Before these points could be clearly ascertained, some coarse tapes had to be loosened, which set free some rough linen material—a striped colored bit of cotton cloth, such as might have been an attractive material for the natives among whom Livingstone travelled,—a coarse cotton shirt, which doubtless belonged to the traveller's scanty wardrobe, and in particular a large portion of the bark of a tree, which had formed the principal part of the package,—the case thereof, no doubt. The skin of the trunk, from the pelvis to the crown of the head, had been untouched. Everywhere was that shrivelling which might have been expected after salting, baking in the sun, and eleven months of time. The features of the face could not be recognized. The hair on the scalp was plentiful, and much longer than he wore it when last in England. A moustache could not

be recognized, but whiskers were in abundance. The forehead was in shape such as we are familiar with from memory, and from the pictures and busts now extant. The circumference of the cranium, from the occiput to the brow, was twenty-three and seven-eighths inches, which was recognized by some present to be in accordance with such measurements when alive.

"In particular the arms attracted attention. They lay as if placed in ordinary fashion, each down by the side. The skin and tissues under were on each side shrunk almost to a skeleton bulk, and at a glance to practised eyes—there were five, I may say six, professional men present—the state of the left arm was such as to convince every one present who had examined it during life, that the limb was Livingstone's. Exactly in the region of the attachment of the deltoid to the humerus there were the indications of an oblique fracture. On moving the arm there were the indications of the ununited fracture. A closer investigation and dissection displayed the false joint, which had long ago been so well recognized by those who had examined the arm in former days. Thousands of heads with a like large circumference might have been under similar scrutiny; the skeletons of hundreds of thousands might have been so; the humerus in each might have been perfect; if one or both had been broken during life it would have united again in such a manner that a tyro could easily have detected the peculiarity. The condition of ununited fracture in this locality is exceedingly rare. I say this from my professional experience; and that such a specimen should have turned up in London from the centre of Africa, excepting in the body of Dr. Livingstone, where it was known by competent authorities to have existed, is beyond human credibility. It must not be supposed by those who are not professionally acquainted with this kind of lesion—which often causes so much interest to the practical surgeon—that a fracture and new joint of the kind now referred to could have been of recent date or made for a purpose."

CORRESPONDENCE.

SLOWTOWN, April 25, 1874.

MY DEAR SIR,—Perhaps you do not know our town,—I beg its pardon, our city; it is not so big a place as it seems, but it delights in two medical colleges. Once, a good while ago, we were foremost in trade and even in literature; but nowadays we have lived to see the trade run away, and to find ourselves reduced to one poet, and he absent in Europe. But then we have still two schools of medicine, which you know make us a medical centre,—the medical centre, we like to call ourselves. The mode of management of these schools is interesting; and, as I hear you are rather discontented about yours, you might like to know how we do it. The managers are chosen chiefly, I may say solely, with reference to their knowledge of medicine; one of the school boards having no medical men, but being made up of retired politicians, bankers,

judges, and lawyers, in and out of work. All of them, however, have, in their time, paid doctors' bills; the judges have heard, and the lawyers examined, medical experts, who have been called upon to testify in murder cases, also; the bankers have furnished letters of credit to doctors who were going to Europe: so that you see they are thus, in one way or another, educated into entire fitness to make a correct choice. I ought to add that the charter provides that in the year 1900 one-half of the trustees shall be elected by the alumni. This is a far-seeing and wise provision, because it is well known that as yet physicians are incapable of knowing who can lecture or who cannot, who has written original papers and who has not; whereas it is earnestly hoped that by the year 1900 they will have come to know as much about it as do lawyers, judges, or ex-politicians. There is, in regard to elections, a very good rule, or set of rules. "The persons who elect are called trustees, which is supposed to be remotely derived from the word trusty; in other terms, trustee is a corruption of the word trusty, and is one of those absurd derivatives of which the dictionaries make so much. They are bound by an oath to choose the best man, which, of course, prevents them from pledging themselves, since it might chance that the best man, or a better, might turn up at the last minute. They collect the opinions of prominent medical men, go and hear the candidates lecture, and thus discriminately reach a choice. Unfettered, however, by such narrow means of judging, they are also open to other and larger influences.

Perhaps it may be well to illustrate this by the ways of the lower creatures known as candidates. These engage in what is called a canvass, which the dictionaries define as a coarse material intended to catch the wind. Each candidate sends all of his friends to call on every trustee. If ten thousand persons call on a trustee, he is obliged by law to vote as they wish. If you are a candidate, and are wise, you ask your grandmother to ask somebody else's grandmother to ask her aunt to get her clergyman to see Mr. So-and-so and to get him to ask his grandmother to request her grandmother to ask Mr. B. to vote for Dr. Q. This is called influence, and whichever fellow has most grandmothers gets the place.

If you do not use this method in Philadelphia, I respectfully suggest its immediate adoption.

Yours,

LANCET.

PROCEEDINGS OF SOCIETIES.

PATHOLOGICAL SOCIETY OF PHILADELPHIA.

THURSDAY EVENING, MARCH 26, 1874.

THE PRESIDENT, DR. WM. PEPPER, in the chair.

DR. J. EWING MEARS presented specimens of *mammary cancer* removed from a patient aged 46 years. The portions exhibited were removed at the

third operation which Dr. Mears had performed upon the patient. At the time of the first operation the entire gland was excised. In a year from this date the disease reappeared in the cicatrix, and two small masses were removed, one of which had undergone ulceration. Eight months following the second operation three nodules of cancerous tissue were excised, the development and growth of these having been very rapid. After the third operation the patient was attacked with pleuro-pneumonia, which terminated fatally in a few days.

In presenting these specimens to the Society, Dr. Mears desired to direct the attention of the members to a method of treatment which had been pursued in this case, and to exhibit the results as shown in the specimens. A short time prior to the first operation, and after the full development of the tumor, the patient was examined by Dr. Washington L. Atlee, in consultation, at whose suggestion the administration of *arsenic* was commenced. The form employed was the official liquor potassii arsenitis, which was given in *two-drop* doses. The medicine was administered without interruption from the time of the first operation until the second,—a period of one year. During this time the patient's general health was remarkably good. There appeared to be an entire absence of that condition designated the "cancerous cachexia." Her appetite was not at all interfered with, and there was no loss of flesh or strength. The return of the cancerous growths in the cicatrix was unattended by pain, from which she had suffered severely during the development of the primary tumor. The portions removed at the second operation were submitted to a careful microscopical examination by Dr. Tyson, and pronounced by him to be specimens of scirrhus. He noted an extreme degree of fatty degeneration in the cells of the structure,—nothing to indicate any impression made upon this secondary growth by the long-continued use of the arsenic.

A good recovery followed the operation, and the patient was again placed upon the arsenic; in five months *three* small masses were observed, one occupying the site of the cicatrix, one about two inches above, and one about one inch below it.

The patient's health was not so good after as before the operation; her strength began to fail, and in other ways she manifested a decline of her former good health. The stomach was not affected by the use of the drug, so far as could be observed. It seems proper to ask that the specimens removed at the third operation should be referred to the Committee on Morbid Growths, for their examination. If these are found to be specimens of scirrhus, the conclusion is inevitable that in this case the remedy was ineffectual in modifying the character of the growth.

The test was made under the most favorable circumstances; the social condition of the patient was such that all directions were strictly enforced; the arsenic was taken regularly and without intermission. The specimens as removed have been submitted to careful microscopic examination, and their character definitely determined.

DR. JOHN ASHHURST, Jr., said that he believed that, with the exception of Prof. Parker, of New York, Dr. W. L. Atlee was the only surgeon of prominence who had any faith in the value of arsenic as a remedy for cancer. Even Prof. Parker did not go so far as Dr. Atlee, who claimed that, by the timely administration of the drug in question, what he called the "cancer-cell" could be "extinguished." Dr. Ashhurst had himself seen nothing, whether in his own experience or in the published reports of others, to lead him to suppose that arsenic had any effect whatever either in preventing the development of cancer or in arresting its growth.

With regard to the absence of cachexia, as reported in the case narrated by Dr. Mears, Dr. Ashhurst said that he thought it was now generally acknowledged by practical surgeons that the term "cancerous cachexia" was a misnomer, the fact being that those patients only became cachectic in whom the disease involved important internal organs, and that the cachexia in such cases was in no degree different from that observed in other cases of a non-cancerous nature. Thus, patients died from external cancer without any development of cachexia, while those in whom the so-called "cancerous cachexia" was best marked might be found after death not to have been affected with cancer at all.

Dr. MEARS said he did not wish to be understood as claiming the influence of arsenic in preventing cachexia; on the other hand, he did not believe in the existence of cachexia in *external cancer*, nor was he satisfied from what he had thus far observed that arsenic exerted any positive influence upon cancer; he had simply brought forward this case as bearing on the subject, which was the more important, since each specimen has been submitted to careful microscopic study, by means of which the true nature of the growths had been accurately determined. He further desired to elicit the opinions of members of the Society who may have had experience in the use of arsenic in cancer. He thought the only way to arrive at a correct conclusion in reference to the therapeutic value of the agent was to adopt the plan he had pursued in this case.

The specimen was referred to the Committee on Morbid Growths, which reported on April 9 as follows:

"The mammary tumors presented by Dr. Mears have a firm, glistening white appearance upon fresh section; very little soft fluid matter can be pressed out from them. Microscopically, the tissue is composed in greater part of thick and tough fibrous bands of the interstitial connective tissue; in this structure are imbedded nests of small, epithelial-like cells, which are seen in the various stages of fatty infiltration and degeneration. At a few points of the growths a distinctly tubular arrangement of the cells could be made out, as if the cancerous infiltration had originated in the tubules of the lacteal glands. No definite conclusion could be arrived at, however, as to the starting-point of the growths, since at many places nothing but a débris of fat-granules denoted the former site of the cancerous cells. The extremely wide and dense bands of the stroma crossing each other in every possible direction, and the almost complete fatty metamorphosis and absorption of the cellular structure, lead your committee to designate these nodules as retracting cicatrizing fibrous carcinoma,—the scirrhus proper."

The PRESIDENT presented a *portion of the thoracic wall from a case in which paracentesis had been successfully performed eighteen months before death*. There had been but little return of effusion, though the signs of plastic exudation and thickening of the pleura continued. Death resulted from chronic ulceration of the colon, in connection with granular kidneys. The point of puncture was in the sixth right intercostal space, about on the line of the anterior border of the axilla. The wound in the skin was visible as a minute white scar. There was no adhesion between the skin and intercostal tissues. The point of puncture on the pleural surface appeared as a minute round hole, one-eighth of an inch in diameter, with dark, discolored walls. The two layers of pleura were very dense, thick, and tightly adherent over the antero-lateral part of the chest. There was no adhesion directly beneath the point of puncture. The changes in the pleura did not seem specially marked in this neighborhood. The case is reported at length in a paper on the "Operative Treatment of Pleural Effusions," read before the Philadelphia County Medical Society on March 25, 1874, and published in the *Phil. Med. Times*.

Dr. JOHN ASHHURST, Jr., asked Dr. Pepper what his experience had taught him was the best position for the operation.

Dr. PEPPER replied that, in his experience, the sixth or seventh interspace in the line of the anterior part of the axilla was the best adapted for the majority of cases of large pleural effusion. In very numerous instances in which he had operated at this point he had never known a single disagreeable symptom to follow.

This was the site originally recommended by Trousseau. It is always dependent, and therefore allows much fluid to escape by gravity; it is easily accessible, the walls are thin, easy of perforation, and it is easy to retain a canula in this position, permanently, if it becomes necessary.

Dr. ASHHURST said that he was glad to find that Dr. Pepper's experience upon this point in a great measure coincided with his own. He had, in tapping the chest, always employed either Bowditch's suction-apparatus or the aspirator, and had usually chosen as the place of puncture a point between the fifth and sixth, or between the sixth and seventh, ribs. Upon one occasion, on which he had adopted a lower point, he had found that towards the close of the operation a good deal of pain was caused by the diaphragm rising against the extremity of the instrument. He had not tapped as high as the fourth intercostal space, as recommended by some British writers, but considered a lower position preferable. The best line for the puncture he thought to be that of the insertion of the serratus magnus,—somewhat posterior, therefore, to that adopted by Dr. Pepper,—as here the muscular covering of the chest-wall was thinnest.

Dr. PEPPER said that the site above the fourth rib sometimes recommended was, under the guidance of Laennec, followed by Walshe and others, with the idea of imitating nature, this being the seat where spontaneous evacuation generally takes place. It appeared to him that it had been based upon false reasoning; he thought the spontaneous opening takes place here, not because it is more advantageous, but because the walls are thinner, the intercostal spaces wider, and consequently the uniform hydrostatic pressure upon the inner surface caused yielding at this point first. This site is inconvenient, because the fluid cannot readily be entirely drawn off; and it may happen that adhesions might form as low down as this point after the operation, while the remaining fluid would gravitate into the more dependent portion of the thorax, and thus require a second tapping lower down.

Dr. J. H. HUTCHINSON presented the specimens from a case of *aneurism of the arch of the aorta*. The patient from whom they were removed was an Irishman, æt. 53, and a coachman by occupation, who was admitted into the Pennsylvania Hospital February 27, 1874. His history was obtained with difficulty, but it appears that three years ago he was overcome in consequence of the inhalation of irritating gases in a chemical laboratory in which he was at that time employed. After the illness which followed this, he suffered from habitual dyspnoea. Two days before his admission he had a chill, accompanied by pains in different parts of his body, and followed by swelling of the face, neck, and upper part of the chest. Although he denied it, it was discovered that he was addicted to drink; but he had never had rheumatism. When admitted, in addition to the swelling already alluded to, he presented a marked cyanotic discoloration of the face and neck. He had some dyspnoea, and an excessively feeble radial pulse. A physical examination showed dullness on the right side of the chest, continuous with the cardiac dullness, extending two inches from the sternum, and from the second to the fifth rib. In the same position a double murmur was heard; the diastolic murmur being harsher

and of higher pitch than the systolic; these murmurs were so loud that they were heard all over the chest. A decided impulse could be felt, but at no time could a thrill be discovered. There was no dysphagia, no dropsy, and no albumen in the urine. The pulse at the wrist was weak, but perfectly regular, and no difference could be detected between the beats of any of the corresponding arteries of the body. The symptoms increased in severity from day to day, the congestion becoming more decided, and giving rise to a very œdematous condition of the upper part of the body, especially on the right side; the cutaneous veins of the chest were enormously dilated. Around the lower part of the thorax these dilatations presented an arborescent appearance, and completely surrounded the body, like a girdle. On the 10th of March, the day of the patient's death, the whole of the right side of the chest anteriorly was dull on percussion, the dulness being sharply limited laterally by a line continuous with the posterior fold of the axilla. In the dull region the breath-sounds were feeble and distant, and there was an absence of vocal fremitus. Death occurred at 11 P.M., rather suddenly.

The *autopsy* was made twelve hours after death. The rigor mortis was well marked. There was no emaciation; the veins of the upper part of the body were enlarged. The right pleural cavity in front was filled with serum and clotted blood, which had been prevented from sinking to the lowest part of the cavity by the presence of adhesions. In the median line, above the pericardial sac and partly to its right side, was a large aneurismal sac, taking its origin apparently from the commencement of the transverse portion of the arch of the aorta, about three inches above the sigmoid valves, where the walls of the artery on the right side came to an abrupt termination, presenting an appearance very much as if they had been cut with a sharp knife. The aneurism, which appeared to have begun as a dissecting aneurism, and to have become diffused not long before the fatal termination,—probably at the time when the chill occurred,—extended from the arch of the aorta to the pericardium, resting upon the diaphragm, and partially compressing the right lung. The rupture was found in the wall of the sac on the right, near its upper part. The vena cava descendens was compressed by the aneurism.

Dr. Hutchinson said that the external coat of the aorta appeared to line the whole of the aneurism except at its lower part, where it was seen to terminate by a ragged edge. He called attention to the fact that the patient, although troubled with some shortness of breath, had been able to do his work up to two weeks before his death, when the chill occurred, which was followed by the symptoms caused by pressure on the cava descendens.

Dr. Hutchinson considered the case remarkable because the other pressure-symptoms were absent. Thus, although dyspnoea had existed some time before the patient came under observation, there was no evidence that either bronchial tube was compressed. There was no dysphagia, and the pupils were of equal size, and reacted to light. He thought the most curious feature of the case was the venous girdle, which recalled in its disposition herpes zoster, but differed from this in completely surrounding the body. It made its appearance in a single night; at least, it was absent at one visit and present at the next.

The PRESIDENT asked the members whether they had ever met with this extreme cyanosis and œdema of neck and chest-walls. While they are very frequent attendants of mediastinal tumors, he had rarely found the symptoms in thoracic aneurism. He also desired to know of Dr. Hutchinson how he accounted for the symptoms of cyanosis, whether by pressure or by the presence of a coagulum obstructing some of the large veins.

Dr. HUTCHINSON replied that the cyanosis was undoubtedly owing at first to pressure upon the cava descendens, and possibly upon the right vena innominata. Later, coagulation may have taken place in the right jugular and subclavian veins, as clots were found in these vessels after death. Towards the close of the patient's life the cyanosis was not so marked as before, in consequence of the establishment of the collateral circulation. Dr. H. was also impressed by the fact that the diastolic murmur was rougher and of higher pitch than the systolic. He had diagnosed the probable existence of aneurism, although the symptoms and physical signs, while they indicated unmistakably the presence of an intra-thoracic tumor, left the nature of this somewhat in doubt.

Dr. J. EWING MEARS said he had not examined the specimen very closely, but he thought the phenomena of pressure might be accounted for by the direction the tumor had taken, which was towards the right.

Dr. HUTCHINSON also presented an *aorta showing calcareous and atheromatous degeneration*, removed from the body of an old man, 75 years of age, who had died at the Pennsylvania Hospital with symptoms indicating obstruction to the circulation. During life no murmur was heard in any part of the chest, although a physical examination was repeatedly made; the symptoms appearing to indicate valvular disease. The man had also suffered in early life from rheumatism. A calcareous plate, an inch in length, was found in the upper wall of the arch of the aorta and in other parts of the vessel; its inner coat was the seat of extensive atheromatous changes.

Dr. H. remarked that occasionally murmurs were absent when all the physical conditions necessary for their production appeared to be present. In this case the examination of the heart was rendered difficult in consequence of the œdema of the walls of the chest, and of the existence of mucus in the bronchi, giving rise to mucous râles.

Dr. OSCAR H. ALLIS presented the larynx from a case of *pseudo-membranous laryngitis* in a child 14 months old, removed twenty-four hours after death. The child was taken suddenly ill on Sunday, March 22, about midday. It had been ailing for a few days with a slight cough, but its symptoms were hardly sufficient to attract attention. The first cause of alarm was extreme dyspnoea, simulating croup. He saw the case late in the afternoon. The child was then extremely restless, presenting every symptom of obstructed breathing,—forty respirations per minute, and with each the chest above the clavicle and below the sternum was deeply depressed. With the inspiration was a harsh and somewhat shrill or hissing sound.

The anterior nares were filled with a hardened mucus, and gave evidence of the presence of a slight catarrhal affection. The tongue was dry (the child was breathing with open mouth), and covered with dark-brown fur. The fauces and pharynx were inflamed, but there was no evidence of inflammatory deposit. There was no unusual heat of skin; no special evidence of fever, save excessive thirst. There was no pulmonary complication. The child lingered thirty hours, with no amelioration of these symptoms.

Autopsy, twenty-four hours after death.—Larynx swollen, with covering of distinct pseudo-membrane. Dyspnoea due probably to the swelling and amount of œdema, rather than to the abundance of pseudo-membrane. Membrane distinct in trachea below the cricoid cartilage, and could be easily floated off by a stream of water. Lungs healthy.

There were two circumstances prejudicial to surgical interference:

1. *The age of the child*.—This, as has been stated, was 14 months. Though few children survive the oper-

ation under four years, yet there are fourteen successful cases recorded under 24 months, and five cases under 14 months. The youngest case he had found recorded* was by Barthez, at 7 months.

2. *The surroundings.*—The child was an inmate of a "home for children," and it is needless to speak at length either of their condition at these "homes," even under the most favorable circumstances, or the privation and wretchedness from which they have been transplanted.

Dr. Allis desired an expression of opinion from the members of the Society as to the propriety of an operation in similar cases.

In an autopsy in a case of two and a half years, the membrane was found to form a complete cylindrical lining to the trachea. This was very soft, and could easily have been ejected through an artificial opening. An operation in this case might have proved instantly fatal, unless a sufficiently large opening had been made in the trachea to have permitted the easy ejection of the membrane. In two other cases, the autopsy had confirmed him in the belief that if an operation gave no better promise than of temporary relief, it were far better to run the risk than to abandon the case.

Dr. HUTCHINSON said he had seen the case in consultation, and, although he was aware that œdema of the larynx was rare in children, he thought the symptoms pointed rather to œdema than to false membrane. He had considered as pointing to this the peculiar hissing sound of inspiration, and the excessive action of the abdominal muscles. These facts, in connection with the extreme youth of the child, caused him to advise against an operation, inasmuch as recovery was very rare under four years of age. He recommended calomel in very small doses, without, however, expecting it to be of much service. The symptoms here were very similar to those of a case he had seen with Dr. John Ashhurst, Jr., in which there was œdema, and in which Dr. Ashhurst had operated with an unfortunate result.

Dr. ASHHURST said that the case to which Dr. Hutchinson had referred was one of œdema of the larynx, supervening during recovery from scarlet fever. The patient was a child about four years old, and, though almost moribund when seen by Dr. Ashhurst, Dr. Hutchinson and he thought it right to submit the question of opening the trachea to the parents, and, with their approval, to give the chance offered by the operation, which was attended with no particular difficulty, and which, though it certainly did not prolong life, yet scarcely, if at all, hastened death. With regard to the applicability of tracheotomy in cases of very young children, while Dr. Ashhurst could not endorse the rule laid down by some writers, that the operation was never justifiable in those less than four years of age, he regarded the prospects of a successful issue under such circumstances, particularly when the case was one of diphtheria or of pseudo-membranous croup, as extremely slight.

GLEANINGS FROM OUR EXCHANGES.

CANCER (*The Lancet*, March 21, 1874).—At a recent meeting of the Pathological Society of London, an interesting discussion took place on the subject of the origin and nature of cancer. Sir James Paget said that all that we see in the life of cancer naturally leads to the belief that the disease must from the first be more than a mere local tissue-change, and maintained the view that, though local in its origin, there is in some, possibly

in all, cases a predisposition to the disease which may be distributed through the system, but much more probably has its seat in some among the tissues of the body. We must hold both a local and a constitutional element as a necessary condition in every or nearly every case of cancer that comes under our observation. In the long group of diseases which we call cancers, there may be at one end diseases in which it is hard to discern any constitutional element at all, and at the other end, diseases in which the constitutional element far predominates over anything that we can suppose to belong to locality. We cannot overestimate the importance of inheritance in the origination of cancer, and it is not possible to conceive of the origin of cancer, or of any disease of the like kind, except by inheritance. In about one in three of all patients with cancer, the occurrence of the same disease in other members of the family is well known, and this number does not nearly represent what we may safely assume to be the predominance of inheritance in cancer. Of course, local diseases are also inherited, as in the cases of fatty or cartilaginous tumors, cutaneous cysts, malformations, etc.; but the contrast between inheritance of a local disease and inheritance of a constitutional one is very striking. When a local disease is inherited, it passes from progenitor to offspring in the same tissue, if not in the same place: we do not find cutaneous cysts growing in the stomach or testes of the offspring of those that have had them on their scalps. On the other hand, the transmission of cancer by inheritance accords perfectly with what we see in other constitutional diseases, as gout, syphilis, tuberculosis, and scrofula, the locality in each person being determined by some other circumstance than hereditary influence, which merely supplies the predisposition to the disease.

Next, if we watch the effects of injury in the production of cancer, we see very notably that it follows the same rule as it does in the production of others which we call constitutional diseases. Cancer sometimes appears, as the expression is, of itself; there is apparently so little provocation of it that we trace nothing that we can call an exciting cause. But in a very large number of cases it follows injury, and sometimes it follows so quickly that it is impossible to disconnect it from the changes which the injury has produced. Now, we know what is the limit of changes of structure which can be produced by injury in any person of sound constitution. The ordinary processes of repair, and the ordinary changes into which they may deviate without any constitutional condition being present, are as well known as are the ordinary changes of nutrition; and when, after injury, there is a deviation from these ordinary changes, we seldom or never entertain a question but that it is due to some constitutional defect in the person in whom it occurs.

This, therefore, is a second reason for maintaining in its fullest force the power of the constitutional element in cancer. Again, the same element is strongly marked in the constancy and in the method of its recurrence after operation or after complete excision. In ordinary typical cancer of the breast or any other part which is its frequent seat, the number of cases in which it does not recur is not more than one in five hundred, while not more than one in five hundred of the ordinary non-cancerous tumors ever reappears.

In the case of the so-called recurrent tumors, tumors which seem to stand between the cancerous and the non-cancerous, the very large majority reappear again, time after time. In one case such a tumor was removed eighteen times; but in the whole history of the surgery of cancers there is not a single case in which a cancerous mass was removed from the same part eighteen, or even eight, times, without the production of similar disease in the lymphatics and in the other organs.

* Meigs and Pepper, "Diseases of Children."

This recurrence has been referred to the mobility of cells, to their readiness to pass from one part to another; but in ostoid or scirrhus cancer the mass is very hard and dense, yet the disease is almost invariably propagated, while recurrent fibroid or cartilaginous growths are as soft, and are composed of cells and free nuclei as little held together, as in any of the softest forms of cancer, but do not, except in rare cases, propagate themselves.

Cancer is probably a blood-disease, because, as a constitutional disease, it is necessary to admit that it is all-pervading; and of the few tissues which are found in all parts of the body the blood is the one which, by analogy, we would expect to find the subject of disease. The objections which have been advanced to this theory are that a person may be cancerous and yet seem to enjoy perfect health; that in cancerous persons injuries may be inflicted and yet no cancerous change ensue; and that long intervals of health frequently exist between the removal of a cancer and the reappearance of another. All these objections, however, would apply equally to gout, syphilis, scrofula or tuberculosis, and all other constitutional diseases. It has been asked, how is it that, if there be the morbid blood in cancer, it should be more frequent in the female than in the male? This is easily answered. Cancer is eminently a disease of degenerated tissues. We are wholly misled if we suppose that cancer is a disease of healthy persons, whether by local degeneracy or general; it is essentially a disease of degeneracy, and increases in frequency in proportion to the number of persons living as age goes on. And the apparent exception proves the rule; for there are in women, without any correspondences in men, two organs which enter into degeneracy, closely corresponding with the senile, at a comparatively early period of life,—the breast and the uterus; and it is the predominance of cancer in the breast and uterus that alone makes the greater frequency of cancer in the female than in the male.

The great importance of considering cancer as a constitutional disease lies in the fact that, if we have any hope at all of curing it, it must be by constitutional remedies, as we have failed to cure it as a local disease for centuries past, and in hundreds of thousands of cases. We must hope that some day there may come to us a remedy as little expected, but not less sure, than was the employment of mercury in syphilis.

Mr. Arnott said that in relation to the manner of inheritance of cancer as compared with local diseases, as fatty, bony, or cartilaginous tumors, the difference exists because the latter are, for the most part, hypertrophies of a single tissue, and are not heterologous formations.

Sir James Paget had asked why we did not find a local recurrence in cancer as in those tumors which are called recurrent; and asserted that it was not anything in the physical attributes of the tumor, because scirrhus and osteoid cancers, which are excessively hard, are constantly and diffusely propagated. It may be said in reply that it is not the gross hardness or softness of a tumor which determines its diffusibility, but it is the distribution of its elements. We find that the mobility of the elements of a tumor stands in direct ratio to its malignancy, other conditions being the same. Thus, in glioma of the eyeball the cells are united only by a very diffuent creamy fluid, and accordingly we find that of all tumors glioma is one of the most malignant. In scirrhus carcinoma the cells lie loose and detached from one another, while in the recurrent tumor the cells are bound together by a grumous intercellular material, and therefore we do not find this latter tumor nearly so malignant as cancer, never affecting the lymphatic glands, seldom affecting distant parts of the system. So with other tumors. The *position* of tumors affects to a large extent their malignancy.

In proportion as that position is subjected to the conditions of warmth, of moisture, of great vascular supply, of free lymphatic connections, and of occasional exalted functional activity, do we find that the tumor is likely to be malignant. Admitting to the full that there is a constitutional something underlying the local appearances of cancer, we must admit at the same time that there is a similar or a somewhat analogous constitutional something underlying the simplest tumor; and if, by bearing this fact in mind, and taking into consideration with it the anatomical peculiarities of tumors, we are able to say that such a one should be malignant because of its anatomical peculiarities, or of its position, and that another will be innocent because of its anatomical peculiarities and position, then we need not be driven to search for any hypothesis of a blood-disease in the sense of syphilis or gout.

Sir Wm. Gull said that in dealing practically with malignant disease we may regard it as a local condition of the tissue then and there, however much the local development of it may have had to do with some inherited predisposition which we may properly term constitutional. If we could investigate the first beginning of cancerous change, and could take away the part, we should for the time rid our patient of the cancerous tendency in the particular part or place. Clinical observation shows that cases of operation in the eye, where defective vision is almost immediately recognized, have longer immunity from secondary cancer than cases of operation elsewhere.

Dr. Payne said that he supposed all persons were agreed in describing a growth as cancer when, whatever its minute character might be, it had already begun to infect or infiltrate a neighboring part. This infection or infiltration means that a change, or growth, or something which began in one tissue, has passed over from that part in which it originally began, to another which is adjacent to it and not of the same kind. Anatomically, one can give no better definition of cancer than that there is a kind of duality in its structure; that one part of the structure, looked at anatomically, is of one kind, and another part is at all events different, whether actually of another kind or not—another kind essentially. At all events, it is different in some respects. Now, this simple fact means that when any disease or change has once bridged over that very narrow but very important interval which separates tissues of one kind from tissues of another kind, it is almost as good as if it had already spread all over the body, because there is no longer in the whole course of its transmission through the body any barrier nearly so complete and incapable of being crossed as that which it has already passed.

A LUSUS NATURÆ (*Ohio Medical and Surgical Reporter*, January and March, 1874).—Dr. U. L. Huyette reports the case of a child born with a fluctuating tumor on its lumbo-sacral region, which was extirpated a few weeks after birth. Attached to the body of the child, with a perfect vascular and nervous connection, were a foot, leg, and thigh. The foot had three toes, with nails perfect, and on the thigh was a covering of down. The whole member measured about three and a half inches. There were also the rudiment of a hand, a small placenta, and three distinct sacs, which, together with the tumor proper, contained a fluid resembling the liquor amnii.

RUPTURE OF THE HEART FROM CONCUSSION (*Indian Medical Gazette*).—A man, æt. 23 years, was struck with the end of a *lathee* on the left breast, and died about two hours afterwards. There was no external mark of violence, but the cavity of the pericardium was completely filled with coagulated blood, and a fissure was found to exist in the wall of the left ventricle.

MISCELLANY.

· LAUGHTER AS A MEDICINE.—A short time since, two individuals were lying in one room, very sick, one with brain-fever, and the other with an aggravated case of the mumps. They were so low that watchers were needed every night, and it was thought doubtful if the one sick of fever could recover. A gentleman was engaged to watch over-night, his duty being to wake the nurse whenever it became necessary to administer medicine. In the course of the night both watcher and nurse fell asleep. The man with the mumps lay watching the clock, and saw that it was time to give the fever-patient his potion. He was unable to speak aloud, or to move any portion of his body except his arms, but, seizing a pillow, he managed to strike the watcher in the face with it. Thus suddenly awakened, the watcher sprang from his seat, falling to the floor, and awakened both the nurse and the fever-patient. The incident struck the sick men as very ludicrous, and they laughed heartily at it for some fifteen or twenty minutes. When the doctor came in the morning he found his patients vastly improved, and said he never knew so sudden a turn for the better; now both are up and well. Who says laughter is not the best of medicines? And this reminds the writer of another case. A gentleman was suffering from an ulceration in the throat, which at length became so swollen that his life was despaired of. His household came to his bedside to bid him farewell. Each individual shook hands with the dying man, and then went away weeping. Last of all came a pet ape, and, shaking the man's hand, went away also with its hands over its eyes. It was so ludicrous a sight that the patient was forced to laugh, and laughed so heartily that the ulcer broke, and his life was saved.—*The Sanitarian*, for May.

LIQUID GLUE.—*Colle liquide et inaltérable* is made by taking one kilogramme of glue, and dissolving it in one litre of water, in a glazed pot over a gentle fire, or, what is better, in the warm-bath, stirring it from time to time. When all the glue is melted, 200 grm. of nitric acid (spec. grav. 1.32) are to be poured in, in small quantities at a time. This addition produces an effervescence, owing to the disengagement of hyponitrous acid. When all the acid is added, the vessel is to be taken from the fire and left to cool. I have kept the glue, thus prepared, in an open vessel during more than two years, without its undergoing any change. It is very convenient in chemical operations; I use it with advantage in my laboratory for the preservation of various gases, by covering strips of linen with it.—Writer in *Comptes-Rendus* (1852), *Chemical Gazette*.

CREMATION OF THE DEAD.—The Communal Council of Vienna has adopted, by a large majority, the proposal of one of its members to establish in the cemetery the necessary apparatus for cremation, the use of which will be optional and open to all. A similar proposition is now being agitated at Grätz, which contains a population of 100,000.

ERICHSEN ON THE ELASTIC LIGATURE.—In a letter to the *Medical Times and Gazette*, Mr. John Erichsen characterizes the use of Prof. Dittel's elastic ligature as "simply a return to mediæval barbarism."—*New York Medical Journal*.

NOTES AND QUERIES.

TO THE EDITOR OF THE PHILADELPHIA MEDICAL TIMES:

IN two cases of advanced phthisis pulmonalis, I transfused about four ounces of lamb's blood, each time from a living three-months-old lamb. The syringe used was the modification of Aveling's Transfusion Syringe. Messrs. Tiemann & Co., New York, are getting up a syringe for me after the pattern of Dr. Hasse, Nordhausen, Germany, and which the latter uses only for transfusion of lamb's blood. The cases are so far benefited, but, being only two weeks old, it would be premature to give an opinion. I shall at some future time give a detailed article on the subject, and would recommend to your readers "Die Transfusion des Blutes," by Dr. Franz Gesellius, and "Die Lamm-blut Transfusion beim Menschen," by Dr. Oscar Hasse, Nordhausen.

The latter author has already transfused in thirty-seven cases, with decided success.

Very respectfully yours,
CARL PROEGLER, M.D.

ADDISON, ILL., 25th April, 1874.

GENERAL ORDERS }
No. 29. }

WAR DEPARTMENT,
ADJUTANT-GENERAL'S OFFICE,
WASHINGTON, April 8, 1874.

The following Joint Resolution of Congress is published for the information and government of all concerned:

"JOINT RESOLUTION authorizing the Secretary of War to detail a medical officer of the Army to inquire into, and to report upon, the causes of epidemic cholera.

"WHEREAS, epidemic cholera prevailed during the year eighteen hundred and seventy-three in various parts of the United States, especially in the valley of the Mississippi, causing a deplorable mortality; and whereas it is highly important that, whenever such epidemics occur, the facts concerning the spread of the disease and its mode of propagation should be ascertained as fully as possible, with a view to the prevention or limitation of future outbreaks; therefore

"Resolved, by the Senate and House of Representatives of the United States of America in Congress assembled, That the Secretary of War be, and he is hereby, authorized and directed to detail one medical officer of the Army, who shall, during the present year, under the direction of the Surgeon-General of the Army, in connection with the supervising-surgeon of marine hospitals, acting under the direction of the Secretary of the Treasury, visit the towns at which cholera prevailed during eighteen hundred and seventy-three, or such of them as in the opinion of the Surgeon-General and Secretary of the Treasury may be necessary, confer with the health authorities and resident physicians of such towns, and collect, so far as possible, all facts of importance with regard to such epidemic, and shall make a detailed report of the information collected on or before the first day of January, eighteen hundred and seventy-five, to the President, to be submitted to Congress. And the Surgeon-General is hereby authorized and directed to report to the Secretary of War, for publication, such information on the subject as he may have, or shall obtain."

Approved March 25, 1874.

By order of the Secretary of War:

E. D. TOWNSEND,
Adjutant-General.

Official:
Assistant Adjutant-General.

OFFICIAL LIST

OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U.S. ARMY, FROM APRIL 28 TO MAY 4, 1874, INCLUSIVE.

McCLELLAN, ELY, ASSISTANT-SURGEON.—Relieved from duty at the Post of Lebanon, Ky., to enable him to comply with orders from War Department. S. O. 67, Department of the South, April 30, 1874.

GIRARD, A. C., ASSISTANT-SURGEON.—When relieved by Acting-Assistant-Surgeon Berkly, U.S. Army, to comply with orders received from War Department. S. O. 66, Department of the South, April 29, 1874.

SATURDAY, MAY 16, 1874.

ORIGINAL COMMUNICATIONS.

ON THE PRACTICAL IDENTITY OF TRUE CROUP AND DIPHTHERIA.

Read before the Philadelphia County Medical Society, Feb. 11, 1874.

BY BENJAMIN LEE, A.M., M.D.

HAYS'S *Journal* for January, 1870, contains a valuable and suggestive article with the following title: "Case of Diphtheritic Croup in which Tracheotomy was performed; Death on the Seventh Day from the Systemic Poison. By John H. Packard, M.D., of Philadelphia." At the close of the paper Dr. Packard says, "As to the cause of death. It is a very common opinion that the existence of false membrane in the bronchi or trachea is a strong contra-indication to operating, and that its absence is in favor of success. Yet in the case now detailed there was no such deposit found anywhere in the air-passages after death, although some casts were coughed up within the first three days. The child died from blood-poisoning; all that could be gained by the operation was gained."

"THE CHILD DIED FROM BLOOD-POISONING," or—as the doctor puts it boldly and distinctly in his title, thus distinguishing it from that blood-deterioration which results from deficient aëration—"FROM THE SYSTEMIC POISON."

My own belief is that in many, perhaps the majority of fatal cases of croup, the cause of death is *the systemic poison*, and that in all cases of croup our main chance of success consists in *counteracting* the systemic poison. It is in this belief that I offer the following remarks. At the time that I entered upon the practice of my profession in the city of New York, the medical mind was greatly agitated upon the subject of diphtheria, which had burst forth as an epidemic in several centres at the North and East, but nowhere so destructively as at Albany. A new disease to most of those who were thus suddenly called upon to confront it, they were naturally at a loss to know on what ground to meet it. Unfortunately, it was usually looked upon as a sthenic inflammation, and vigorously combated with antiphlogistics. That seductive little termination, *itis*, which so charmingly simplifies our pathological theories, supplying a bran-new, ready-made nosological nomenclature, with the very trifling expenditure of thought required in appending the same to the Greek (or, as was and is often ignorantly done, to the Latin) name of the organ or tissue which appeared to be most prominently affected in any given case or class of cases, was now most shamelessly married to one of its own family,—tacked on to the end of a morbid process,—and the resultant monster was diphtheritis, or an inflammation of a false membrane. The philological blunder we may pass over with a smile, but the pathological blunder which it expressed and the therapeutical blunder which it induced we can only look back upon with horror. The fatal char-

acter of those early epidemics is only too well remembered. But gradually light dawned. Some practitioners, empirically, simply seeking to avoid those remedies which at least produced no beneficial result,—others, on theoretical and rational grounds, tracing in the symptoms the general outline of a systemic blood-disease,—began timidly to pursue a supporting plan, and to seek for an antidote to the suspected poison. This was found in the salts of chlorine; and diphtheria speedily became the more manageable disease it is to-day. The analogy between the exudation of croup and that of diphtheria early attracted attention; but a still further analogy impressed me even more deeply,—that exhibited in the unhappily similar results of the same line of treatment,—viz., the depletory and depressant, the grandly-named antiphlogistic plan applied to the two affections. The mortality in both under similar arrangement was almost identical, and in this I recognized an argument for the identity of the morbid processes, and determined, when occasion presented, to test the matter by exhibiting in croup the class of remedies which had changed the whole complexion of diphtheria. The opportunity was some time in offering itself. In the course of perhaps a couple of years, having in the mean time had occasional cases of the latter disease to treat, I was summoned by telegraph to New Rochelle to see a child suffering under the former. Before leaving the city I fortified myself with a large phial of solution of chlorate of potassium, and a number of sulphate of quinine powders. The physician in charge was an elderly gentleman, of great intelligence, but who had for a considerable period retired from the active practice of his profession. The case was in the second stage, and, although not of the most intense grade, had progressed steadily, and as yet shown no signs of amelioration. The treatment had been thoroughly routine,—emesis by ipecacuanha, antiphlogosis by tartrate of antimony and potash, and defibrination by calomel. I concurred in its propriety, but suggested that it had already accomplished all that it could do, and that the time had perhaps arrived for substituting a supporting course. This was readily acquiesced in. I had the satisfaction of learning the next day that the symptoms already showed some improvement. The child recovered, happily. I would like in this connection to call attention to the formula which I employed for the preparation of the chlorate of potassium solution, as I doubt if it is in general use, and am confident of its superior efficacy:

R Potass. chlorat., ℥viij;

Acid. hydrochloric., ℥viij;

Rub together until greenish fumes of chlorine begin to rise, then add aq. cinnamom., f℥viij.—M.

S.—A tablespoonful every two hours.

This preparation contains chlorine, as will readily be seen, not only in its saline combination, but also free, and may be called the chlorinated solution of chlorate of potassium. It is the prescription of a British physician, whose name I unfortunately failed to preserve in appropriating his idea, and has cer-

tainly a peculiar potency, not only over diphtheritic processes, but in that troublesome, and just now frequent, form of throat-disease,—ulcerative tonsillitis,—the *herpes gutturalis* of Trousseau. I am well aware that a single case will not serve as a peg to hang a theory on, but it may answer for a text in connection with that first referred to. That I have never had another case of croup to treat is accounted for by two facts: the first, that I shortly afterwards withdrew from family practice; the second, that I invariably examine the throat of a child presenting febrile symptoms or acute disturbance of digestion, and attack every case of acute faucial congestion that offers itself, at the outset, with chlorate of potassium and quinine, carefully avoiding cathartics and depressants, and thus, as I believe, prevent the development of the diphtheritic poison. Had I, however, only my own meagre experience to adduce in support of the theory for which I am contending, I should be guilty of shameless presumption in airing it before a body at once so learnedly critical and so practically familiar with the facies of the affections in question. My design is rather to make use of the observations of those who have had larger opportunities and made a better use of them, in showing, first, that the analogy between these two diseases in every essential particular is so striking as to amount to a proof of identity, and secondly, that such an opinion is now steadily gaining ground among those who have most carefully studied them in their clinical as well as their pathological aspects.

Diphtheria may be defined in the light of the most recent investigations to be a zymotic disease, affecting the entire system through the presence, and probable multiplication, of a foreign living organism in the blood, having as a local manifestation an effusion of plastic coagulable material in the substance of the mucous membrane of the cavities of the mouth, pharynx, and nose, or an exudation of the same upon its surface. Its general symptoms are gradually increasing heat of skin and frequency of pulse, the latter rapidly becoming feeble, slight digestive disturbance beyond loss of appetite, and a degree of general prostration of the nervous forces quite out of proportion to the local lesion. In fatal cases, death evidently results from systemic poisoning. It is usually plainly epidemic, or contagious, or both.

As to its therapeutics, a system of depletion, whether by blood-letting, or active catharsis, or excessive emesis or profuse diaphoresis, or of contrast-stimulus by the prolonged use of nauseants, and notably of tartrate of antimony, is almost invariably followed by an aggravation of the symptoms, and, if persisted in, too frequently by a fatal termination. On the other hand, the free exhibition of an antizymotic, of which chlorine, either in solution or in composition with iron or an alkaline salt, appears to be the most deadly to this form of fermentative growths, and of bark or one of its alkaloids (of which quinia still stands *facile princeps*), a nourishing diet, and comparatively early resort to stimulus, will in the majority of instances conduct the case to a favorable issue.

Now, I claim that no one can take up a standard text-book on children's diseases, if the production of an author who holds the mirror fairly and squarely up to nature, instead of squinting at her through the crowquill of preconceived bias and prejudice, and read the description of these two diseases, without being struck with the close resemblance in their mode of invasion, progress, character of fatal termination, when not induced by immediate suffocation, and rate of convalescence. Even writers who believe croup to be a sthenic local inflammation are forced to admit that the febrile action is of a markedly lower grade than that which obtains in simple uncomplicated or spasmodic laryngitis. Thus, Meigs, than whom no one has described more faithfully the natural history of children's diseases, says, in treating of the differential diagnosis of these two last-mentioned affections, "The pseudo-membranous form of the disease is often preceded or accompanied by the presence of false membranes in the fauces, which is not the case in spasmodic, simple laryngitis; the symptoms of invasion of the former disease are *less acute* than those of the latter, the *fever being less violent* and the restlessness and irritability less marked than is usual in the simple affection, in which the general symptoms are severe from the first. The hoarseness of the voice and the cough follow a different course in the two diseases; the progress of these symptoms being slow and gradual in the membranous, and much more rapid in the severe spasmodic form. The fever is violent throughout the attack in the severe spasmodic disease, whilst in the other form it seldom reaches a high degree of intensity." He aptly describes the invasion of true croup as "*slow and creeping*." What means this "*slow and creeping*,"—this stealthy and masked—advance upon the citadel of life, but the development and diffusion throughout the body of a morbid material, gradually making itself master of all the avenues of approach? What has it in common with the bold onset of a frank, declared inflammation, such as an acute pleuritis or simple laryngitis? And how closely is it in relation with the prodromic period of most of the true fevers, and of diphtheria!

Bouchut, in his admirable work on children's diseases, entitled "*Traité pratique des Maladies des Nouveaux-Nés et des Enfants à la Mamelle*," unhesitatingly attributes to croup two of the essential characteristics of zymotic diseases,—first, that it does not ordinarily attack the same individual a second time, and secondly, that it is an epidemic disease; and, although he avoids committing himself unqualifiedly to a belief in its contagion, he considers it safer to separate children suffering under it from the healthy.

My impression, from consulting other authorities, is strong that these three traits of resemblance must all be admitted. So much, then, for the general family likeness existing between the two affections. Let us now consider the argument from therapeutics.

Prof. Fordyce Barker, of Bellevue Hospital Medical College, New York, in a communication addressed to Prof. A. Jacobi, on the "Treatment of Croup," which was published in the *American*

Journal of Obstetrics and Diseases of Women and Children, vol. iii. No. 1, May, 1870, boldly takes the ground that true croup and false croup are one and the same disease, differing only in the depth to which the tissues are involved, excluding the croup of diphtheria, which he considers a totally different affection. Entertaining, as I do, in addition to the sentiment of respect which the opinions of so conscientious an observer and so skilful a therapist as Dr. Barker command in the professional mind both at home and abroad, that sense of deference which a pupil must unavoidably carry with him through life towards a revered master, I still find myself unable, after a careful perusal of his paper, to accept the position which he here assumes. He appears to found it, although not perhaps avowedly, on the fact that the same remedy, administered at the outset, is, in his hands, equally efficacious in controlling both affections. This remedy is the "turpeth mineral," or yellow sulphate of mercury (*hydrargyri sulphas flava*); and the astonishing success which he has met with in its employment, never having lost a case of croup in the course of a long and intensely busy professional life, devoted in an unusual degree to the treatment of children's diseases, certainly entitles it to a most respectful trial. It must be borne in mind, however, to weigh honestly the value of this testimony, that Prof. Barker would call no case croup in which a particle of diphtheritic membrane had been observed upon the fauces. But, this aside, let us consider for a moment whether the agent which he employs does not possess properties which may render it of extreme value in both the simple spasmodic laryngitis and the diphtheritic infection. Everyone knows that prompt emesis is the one thing needful (to speak in a general way) to control and usually immediately relieve the laryngeal spasm.

Dr. Barker's reasons for preferring this particular means of emesis to all others in croup are the following: "It acts more promptly and efficiently than ipecac or alum; it is tasteless, and much more easily administered than either; it does not exhaust and depress the vital power like antimony; it is equally prompt in its action with sulphate of copper, while it is much more effective as a revulsive and sedative." He adds, "I think the active emesis from the turpeth mineral accomplishes the following results much more effectively and speedily than any other agent: it depletes the mucous membrane, by an abundant secretion of mucus which is thrown up; it removes from the larynx, by the forced expiration which it causes, any albuminous or fibrinous exudation which may be there in a diffuent state, and which by remaining may become subsequently pseudo-membrane; it acts as a powerful revulsive, and thus diminishes the capillary circulation in the trachea and larynx, and thus it becomes a most effective agent in arresting the inflammatory process."

But if an emetic is universally admitted to be the requisite in the spasmodic affection, not less general is the faith in its beneficial action in the diphtheritic or pseudo-membranous. And if we were called upon to sum up the characteristics of

an agent of this class which would best satisfy the requirements and present the fewest objectionable features in the latter form of disease, we could not do so more forcibly and succinctly than he has done in the above description of the properties of this medicament. But do its valuable properties as regards diphtheritic croup cease with its power of inducing prompt emesis? I think we are entitled to return a negative answer to this inquiry, on two grounds. First, that it is an active depurating agent in causing "so abundant a secretion of mucus, which is thrown up;" but, secondly and especially, because it is a sulphur compound, and sulphur is well known to be one of the most determined and destructive foes to the microzyme which the *Pharmacopœia* can command. Its efficacy in destroying the disease-germ present in spasmodic cholera can, I think, no longer be questioned, and it may be as potent over the micrococcus of diphtheria. May not the beneficial action of sulphate of copper, of sulphate of zinc, and of alum, the sheet-anchor of the elder Meigs, aside from their emetic properties, be reasonably attributed to the same component? And if so, do we not see an explanation of the superior value of the mercurial salt in the fact that mercury appears to possess to a more striking degree than any other mineral the *open sesame* to the circulatory and absorbent systems, obtaining admittance not only for itself, but for any remedy with which it may be for the time in the intimate companionship of chemical affinity,—a prompter entrance into the vascular system, and more immediate distribution throughout the body? May we not also read in the same light the happy results which have led the younger Meigs to place such confidence in the mild chloride in the management of membranous croup? Is he not administering that subtle and admirable antizymotic, chlorine, with a directness and efficacy perhaps even exceeding that with which many of us accomplish the same result in the exhibition of the much-trusted chlorate of potassium?

If the commencement of Dr. Barker's treatment appear admirably adapted to cut short a case of diphtheritic croup, however, not less appropriate is its continuation should the disease fail to be thus early arrested. Carbonate of ammonium as a vascular stimulus and promoter of mucous secretion, veratrum to shield the heart and vessels from excessive fatigue and fatal prostration, and quinia to sustain the nervous forces, constitute an armamentarium with which the practitioner might well feel himself tolerably equipped to meet a case of pure pharyngeal diphtheria. Nor must it be forgotten in this connection that all the preparations of cinchona have a peculiar potency in checking fermentation, while in sulphate of quinine we again have the sulphur element entering the problem.

Under the title of "Diphtheria in its Epidemiological, Nosological, and Therapeutic Relations," Dr. Max Jaffe, of Hamburg, presents, in *Schmidt's Jahrbücher* for July, 1873, a complete *résumé* of the periodical literature of this subject during the past four years. The first portion of the paper, that which discusses the epidemiological side of the question, is mainly taken up with the mode of com-

munication and pathological histology of the disease, and the histories of recent epidemics. Numerous interesting experiments in the way of inoculation of the lower animals with diphtheritic poison, on the part of Dr. Oertel of Munich, Letzerich of Braunsfels, and others, are rehearsed, especially with the view of determining whether "*in diphtheria we have to do with a merely local affection, or with a general infectious disease*,"—a question, as he well remarks, of the deepest import, as well for scientific inquirers as for the practising physician. The results are almost invariably in favor of the latter view, that which makes diphtheria a systemic disease with a local manifestation, not a local affection with a resulting disturbance of the general system. A constant microscopic element in the diphtheritic exudation has been found to be fungous growths of extreme minuteness and of immense numbers. These growths are classed as micrococcus or mykothrix. They are found not only in the diphtheritic membrane and in the mucous secretions, but also in great profusion in the blood, distributed through all the organs of the body, and even in the lymphatic vessels and glands. In some instances the lymphatics appeared to be entirely blocked up by them. Collections of these minute organisms were also noticed in the interspaces of the areolar tissue, and between the fat-cells. The kidneys appeared to be the organs to which they were more especially attracted, and in these their presence often coincided with a high degree of inflammation and microscopic extravasations of blood. The second division of the subject is devoted to the consideration of the "*Pathology and Anatomical Pathology*" of the disease, and it is to this portion that I especially desire to call attention.

Dr. Ludwig Letzerich, in an article "*On Exudation and Suppuration*" (croup and diphtheria), contributed to *Virchow's Archiv* (liii. 4, p. 493, 1871), after defining croup as a purely inflammatory process, and diphtheria as, on the contrary, caused by the deposit of a foreign fungous growth, which, piercing the epithelium, makes its way into the substance of the mucous membrane, and thus at the same time excites the diphtheritic exudation and provides for its escape,—while, I say, drawing this distinction carefully, he immediately after makes the following important admissions. First, that the diphtheritic membrane varies greatly in appearance, both under the microscope and to the naked eye, in accordance with the portion of the mucous membrane upon which it is found. On those mucous surfaces which are lined with smooth tessellated epithelium (as those of the mouth, nose, fauces, and vagina) it is usually strong and thick, and microscopically exhibits an abundant dissemination of epithelium-cells, either broken down or well preserved, and a greater or less quantity of pus-cells. On surfaces covered by ciliated or cylindrical epithelium (as the larynx, the upper part of the trachea, and the intestinal canal) it is softer and more creamy; the epithelium is completely eroded, and portions of the exudation appear, under the microscope, as mere masses of detritus, thickly strewn with fungous growths.

Second, that croup and diphtheria are developed together with extreme frequency, passing immediately into each other. Croup, he tells us, is very rarely developed with diphtheria of the mouth, nose, or fauces, but often—indeed, almost invariably—with diphtheria of the under surface of the epiglottis, of that portion of the larynx which lies above the vocal cords, in the lower part of the latter, and in the trachea. This striking fact of the co-existence of the two diseases he has had frequent opportunities of verifying by post-mortem examination. In one case the mucous membrane of the entrance to the larynx was completely destroyed by fungi, while that which lay below the vocal cords was scarcely robbed of its epithelium, simply overlaid with a very thin, creamy layer of diphtheritic exudation. The tracheal mucous membrane, on the other hand, from its commencement down to the bifurcation, was covered with a homogeneous croupal exudation, which was with tolerable ease removed as a complete tube. No fungous forms whatever were found in this cast, but a more or less regular stratification of the mass with pus-cells. The mucous membrane of the trachea retained its epithelium, freely strewn with puruloid cells, and its basal layer deprived of its ciliae, as in pure uncomplicated croup. Death ensued in this child from collapse, induced by the entrance of fermentative fragments into the circulation and the collection and reproduction of the fungi in the internal organs, especially the kidneys and spleen.

An essay delivered before the Medical Society of Berlin by Dr. Conrad Küster (reported in the *Berlin. Klin. Wochenschr.*, ix. 18, 19, 1872), on the Nature of *Diphtheria*, provoked a very animated discussion. He boldly took the ground that from the stand-point of the practising physician it was impossible intelligently to maintain the line of demarcation between these intimately-allied forms of diseased action. Diphtheritic and croupous angina, membranous, gangrenous, and false croup, he considered it impossible to hold as distinct diseases appearing together and running the same course of symptoms, simply and only because (and this perhaps for accidental reasons) the form of the exudation is different. Pathological anatomy explains the difference in showing that in the one case the exudation is superficial, and may then be thrown off as a membrane, while in the other it penetrates deeper into the tissues, producing necrosis, and thus leading to the formation of sloughs. In both membranous and gangrenous anginas we find alike, at the autopsy, diphtheritic sloughs or strongly adherent, deep-rooted deposits, without exception, in the fauces and pharynx and as far as the edges of the epiglottis, and, as we pass into the larynx down the trachea and into the bronchi, only membranous tube-casts, easily removable. We find there a complete mingling of the two forms, and are led to the inevitable conclusion that the character of the exudation is dependent upon the anatomical constitution of the locality in which it is thrown out.

Dr. H. Senator, while supporting the ordinarily accepted view of the distinct entity of the diseases

in question, acknowledged that he had never seen a true croupous inflammation and a corresponding true croupous exudation (a fibrous net-work with concentric layers of fibrin and pus-corpuscles) affecting the mucous membrane of the pharynx, either in diphtheria or any other affection, while, on the other hand, a croupal inflammation, under the influence of a diphtheritic infection in the true air-passages, that is, a diphtheritic croup, was an undoubted fact.

Dr. Lewin, in the *Berlin. Klin. Wochenschr.* and other journals, recognizes two forms of the diphtheritic process,—a protopathic, which attacks those mucous surfaces which are most exposed to the external air, is rarely accompanied by fever, often appears sporadically, and is very amenable to simple remedies; and a deuteropathic, which penetrates to the more protected cavities, is preceded by a prodromal fever, and gives every indication of systemic infection. This is the more purely epidemic form, and is extremely difficult to manage.

In regard to the question of the identity or non-identity of the “diphtheritic and croupous processes,” he holds that in their clinical relations they present a precisely similar configuration, have the same aggregate of symptoms, and consist of the same etiological elements, but anatomically are distinguished by the fact of being deep-seated or superficial. The cause of this difference, however, appears to lie only in the pre-existing histological characteristics of the membrane attacked,—diphtheria on pavement-epithelium, croup on ciliated epithelium; and the laryngeal croup, so often recognized as an independent affection, is therefore only to be regarded as a local manifestation of the diphtheritic process. In reviewing the history of medicine, Dr. L. recalls the fact that since the time of Bretonneau, who regarded croup as essentially laryngeal diphtheria, no author had undertaken to establish a distinction between the diphtheritic and the croupous processes until Virchow, and that even he did not desire to extend his pathologico-anatomical distinction to the clinical aspect of the disease.

Further, the results of treatment and the revelations of the autopsy agree in declaring that both processes may run their course simultaneously in one and the same individual. The purely histological distinction is thus set forth. In the larynx we find two sharply-defined histological regions, that of the pavement-epithelium, extending from the pharynx, along the lingual surface of the epiglottis, thence along its laryngeal surface, upon the false and the true vocal cords, and reaching nearly to the *macula flava*, and that of the ciliated epithelium in the lower regions of the larynx and the trachea. Closely corresponding with these tracts, we often find, in autopsies, the diphtheritic and the croupous processes separated from one another by this same boundary-line. More than this, during life the same differentiation can sometimes be made out by the aid of the laryngoscope. Similar observations may be found recorded by Virchow, Rindfleisch, and Wagner.

In support of the theory that laryngeal croup

only originates from the extension and descent of the diphtheritic affection from the pharynx, he adduces the following consideration. According to all reliable statistics, croup developed primarily in the larynx must be classed among the greatest of rarities. And even these few exceptional cases are often susceptible of other explanation. Diphtheria not seldom runs its course in the larynx unobserved; in those rare cases in which it has been unquestionably observed first in the larynx, it has in all probability taken its rise in the region of the pavement-epithelium, and finally, in cases where no laryngoscopic examination has been made, it is more than probable that a severe catarrhal laryngitis has, in consequence of the severity of its symptoms, been mistaken for laryngeal croup. In point of fact, catarrhal laryngitis may often, by a serous transudation, or a copious infiltration, or even a hemorrhagic extravasation into the areolar tissue of this portion of the larynx, induce a constriction of the glottis and simulate the tone and the dyspnoea of croup, without the presence of any croupal membrane.

In a treatise on “*Croup and Diphtheritis of the Pharyngeal Cavity, Exudation and Pus-Formation*,” Dr. Franz Hartmann, of Wiesbaden (*Virchow's Archiv*, liii. 2, p. 240, 1871), concludes that we are entirely unable to decide as to the “identity or non-identity of croup and diphtheria” from their clinical course, and that we must therefore refer to the development of the pathologico-anatomical processes for a solution of the problem. As regards the exudative process, every exudation has its origin in the vascular system, and consists of a coagulable fluid. In the production of the exudation, the capillaries and the lymphatics, which are closely connected by means of the so-called *serous* (juice) *vessels*, are both concerned. The anatomical arrangement of the mucous membranes is such that there is a possibility of the escape of plasma upon their free surfaces, and in diseased conditions this possibility becomes an actuality. In the pharyngeal cavity this escape of exudative material is favored by the firm compression of the mucous membrane, by means of strong muscular contractions. The primary exudation either coagulates at the spot where it is poured out, or flows down and coagulates below, constituting croup; but the subsequent exudation, in consequence of the muscles having to a considerable extent lost their contractility, is retained in the areolar tissue: that is diphtheria. The croupal exudation, therefore, always precedes the diphtheritic. Sometimes, in consequence of the inflammation being from the outset very acute, the muscular action is greatly interfered with, or even entirely suspended. We have then neither croup nor diphtheria, but angina, with or without abscess. It follows that in order to the establishment of the croupous process the inflammation must not be of a severe grade. He concludes, finally, that croup and diphtheria are not to be distinguished from each other, but are to be regarded as only different stages or grades of one and the same morbid process, no anatomical differentiation being possible.

Dr. Welsch, a physician practising in Kissingen, publishes several cases of croup and diphtheria occurring simultaneously in the same family, which, he considers, *establish the identity of the croupous and diphtheritic processes*, and refers to others which he met in the same neighborhood shortly after, as equally significant.

From the year 1868 to 1872, the north of Italy was the scene of a wide-spread and devastating epidemic of diphtheria, which reached its acme in 1871. So great were the alarm created and the interest excited by it that a committee of the most learned French and Italian physicians of the region was appointed to consider and investigate the subject in all its relations. This committee was unanimously of the opinion that the distinction between croup and diphtheria was one which could no longer be maintained, either from a pathologico-histological or a therapeutic stand-point.

In conclusion, I cannot summon to the support of my position a more powerful ally than Dr. Morell McKenzie, one of the highest British authorities on the larynx, whose opportunities of observation have not been greater than his powers of analysis. This writer, in his Jacksonian Prize Essay on Diseases of the Larynx, quoted by himself in the *British Medical Journal* of March 5, 1870, vigorously combats the doctrine of the distinct nature of these affections, on the following grounds: That neither is always, and both are sometimes, epidemic and contagious; that the exudation is essentially the same, being modified by its site, but presenting histologically no marked difference,—that of diphtheria having been noticed to become organized as well as that of croup; and that the sequelæ of diphtheria—albuminuria and impaired innervation—have also been observed to follow croup.

The opinions and facts just rehearsed, whether they carry conviction to the mind or not as to the point at issue, must be allowed to establish the fact beyond a peradventure that there is in Europe a large, respectable, and growing class of physicians who, however they may differ in their views of the mode of production of these two morbid results, and the accompanying pathologico-anatomical and histological changes and conditions, agree in holding that if not essentially they are at least practically, clinically, and therapeutically to be held as one and the same disease. And whether they are identical or not, this much must be allowed, that at the commencement of the attack so similar are the modes of invasion that no man can tell whether the case will prove to be one of uncomplicated or of diphtheritic croup. This was the fact in the case with the recital of which this paper opens. Fragments of false membrane were coughed up before any diphtheritic patches were seen upon the tonsils. In this view of the subject, then, remembering the deadly nature of the diphtheritic poison, does not prudence dictate that we should at once administer those remedies which experience shows to be antidotal to it and which can be of no injury should it not be present, at the same time withholding such methods of treatment as would be

contra-indicated by its existence? It will not do to wait until “the little one has become a thousand” and every arteriole and capillary is clogged with the sluggish, poisoned tide. We must destroy the germs before they have a chance to multiply.

I feel the less hesitation in urging a new departure in the management of this disease, so fearful alike in its course and in its termination, from the conviction that no plan can be suggested which will give more lamentable results than those which are universally acknowledged to follow that recommended by the systematic text-books.

A CONTRIBUTION TO OUR KNOWLEDGE OF THE VASO-MOTOR ACTION OF ERGOT.

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IN my work upon therapeutics I have given a sufficient summary of our knowledge as to the action of ergot upon the capillary system, and have shown that it is proven that the drug does cause contraction of the small vessels, but that it is as yet unknown whether that contraction is caused by an influence exerted upon the nerve-centres or is the result of a direct action upon the vessels themselves.

It is evident that this question is not one of merely scientific interest, but that it is very practical in its bearings, since, if the latter view be correct, much better results are often to be obtained by the local injection of the drug into the part to be affected than by its administration in other ways; whereas, if ergot acts only through the nervous system it is useless to subject patients to the inconveniences of these local injections. The present investigation has been undertaken to fill up the gap in our knowledge as to the action of ergot upon the capillaries; and, as it supplements the article in my general treatise, I shall say very little about what others have done.

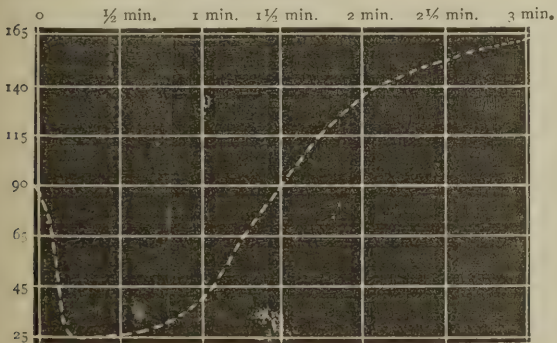
My first experiments were directed to studying the effects of the fluid extract when injected into the cellular tissue. They were two in number; but, as they are in accord with those of numerous previous experimenters, I shall not give them in detail. In one of them $\frac{1}{3}$ iii injected at brief intervals, with $\frac{1}{3}$ ss into the femoral vein, served to raise the arterial pressure from 110–120 mm. to 117–125 mm.,—a rise which is very insignificant when compared with that produced by ergotin in experiments hereafter detailed; and it appears to me that the commercial fluid extract is much inferior and more uncertain than the commercial ergotin. The latter as used in the investigation was of two kinds or brands, resembling each other precisely, one being the preparation furnished by Powers & Weightman, the other that of Rosengarten; the physiological effects were identical.

In the following series of experiments ergotin was injected into the femoral vein.

Experiment III.—A stout young terrier.

TIME IN MIN. AND SEC.	PULSE.	ARTERIAL PRESSURE.	REMARKS.
0	150	85-90	Injected six grains.
1 m.			
1 m. 15 s.		20-25	
1 m. 45 s.		25-30	
2 m. 15 s.	135	60	
2 m. 30 s.		95	
3 m.		130-135	
4 m. 30 s.	96	150-155	
5 m. 30 s.	65	145-160	Injected 12 grains. Clot in tube.
9 m. 30 s.	95	125-145, mostly 130-140	
11 m.			
11 m. 15 s.			
12 m.	102	20-30	Beginning to rise.
12 m. 45 s.	111		
13 m. 30 s.		55-60	
14 m. 30 s.		105-110	
17 m.	63	140-150	Injected twelve grains.
27 m.		105-110	
27 m. 15 s.			
27 m. 30 s.		30-55	
28 m.		15-25	A general spasm.
28 m. 30 s.		12-25	
29 m.		30-40	
31 m.		115-120	
32 m.			Injected twelve grains.
33 m. 45 s.		15-20	Injected four grains.
35 m.			
36 m. 15 s.		25-35	
37 m. 45 s.		55-60	
40 m. 31 s.			Injected twelve grains.
40 m. 45 s.		20-30	
41 m. 15 s.		13-17	
43 m. 45 s.			
44 m. 15 s.		35-40	Injected six grains.
49 m. 15 s.	135	80-90	
54 m.		80-90	

This experiment was repeated once with an exactly similar result, and is in exact accord with those of Dr. Holmes. The whole evidently prove that ergot injected into a vein causes an immediate almost instantaneous fall of pressure, and afterwards a very great rise; also that when enormous doses are employed the arterial pressure is permanently lowered. The most curious of these phenomena is the first fall of pressure; the points to be noted in regard to it are its suddenness and its brevity. Thus, in the detailed experiment, in fifteen seconds the pressure was reduced to one-fourth its original amount, and in ninety seconds was above normal. Expressed graphically, the effect of the first injection was as follows:



Dr. Holmes believes that this first fall is produced by a sudden spasm of the pulmonic capillaries, due to the intense action of the drug first precipitated upon them in overwhelming amount. It is perfectly conceivable, and, in fact, is almost self-evident, that such a spasm, by depriving the left heart of its

proper supply of blood, should lower very remarkably arterial pressure. It is, however, no less self-evident that if ergot, by being taken into the lungs, causes such a spasm as Dr. Holmes believes, the action of the drug must be a local one; for if the ergotic spasm is of centric origin, it can make no difference whether there is much or little of the drug in the lungs themselves. The cause of this sudden fall of arterial pressure is, therefore, best studied after it has been settled as to how the capillary spasm is brought about.

If the rise of pressure be due to a spasm which is centric in origin, paralysis of the vaso-motor nerves ought to prevent the rise of pressure. On the other hand, if the spasm be peripheral in its causation, due to a direct action of the drug upon the vessels, paralysis of the vaso-motor nerves ought not to affect it. As section of the cord high up causes vaso-motor paralysis, it is evident that the following experiments are decisive.

Experiment V.—A stout, plucky terrier. At 10.45 A.M. the cord was cut in the upper dorsal region, completely, as was verified by the autopsy. The first cardiometrical observation was one hour and a half afterwards.

TIME.	ARTERIAL PRESSURE.	REMARKS.
0	103-108	Injected twelve grains.
5 m.	95-100	
6 m.	20-33	
7 m.	25-30	
8 m.	40-45	
9 m.	60-65	
10 m.	75-80	
12 m.	95-100	
14 m.	105-110	Injected twelve grains.
21 m.	88-98	
22 m.		
24 m.	10-15	
24 m. 15 s.	20-25	Injected twelve grains.
26 m.	45-50	
31 m.	105-110	
33 m.	100-105	
44 m.	75-80	Dog killed.
60 m.	55-65	
61 m.	50-55	
64 m.	43-48	
67 m.	43-48	

Experiment VI.—A small but very strong and active terrier. The cord was cut completely, as verified by autopsy, in the upper dorsal region, and fifty minutes afterwards the first cardiometrical studies made.

TIME.	PULSE.	ARTERIAL PRESSURE.	REMARKS.
0	150	65-90; mostly above 80.	Injected twelve grains into femoral vein.
2 s.		35-40	
30 s.		Zero	
1 m. 30 s.	141	30-40	
5 m.	117	50-60	Injected twelve grains into the cellular tissue. Injected six grains into the femoral.
35 m.		75-95, mostly between 85 and 95.	
72 m.		Has been the same since last note.	
72 m. 30 s.		10	
75 m.		20-40	Injected twenty-four grains into the femoral artery. The respiration was momentarily suspended by the injection; now resumed, and pretty regular.
77 m. 30 s.	36	Directly after the injection fell to 10, then to 0, then vibrated between 0 and 10.	
80 m.		Since last note 5-15, now 0.	

These experiments certainly prove that after division of the cord, *i.e.*, after vaso-motor paralysis, ergot is powerless to raise the arterial pressure. The result obtained was verified by cutting the cord in animals already profoundly under the influence of the drug, when it was found that the arterial pressure fell to about its usual point in dogs who have suffered spinal section. Without going into more detail, it is obvious that these results not only prove that the vaso-motor spasm is centric in its origin,—a conclusion in accord with the experiments of Eberty upon frogs,—but also disprove Holmes's theory of pulmonic spasm.

In regard to the real cause of the primary fall, it is in the first place evident that it is owing to the sudden precipitation of an overwhelming dose of the ergot upon something, since, as I have frequently proven by direct experiment, it does not occur when the remedy is thrown into the subcutaneous tissue. The experiments of Eberty indicate very strongly that, when in sufficient amount, ergot acts as a muscle-poison to the heart, a conclusion which is strongly corroborated by the final result in my eighth experiment, in which, after the movement of the mercury and all arterial pressure were at an end, the respirations still went on with fair regularity; and the thorax having been opened, the heart was found not pulsating, but in a curious state of very active vermicular movement, irregular waves of movement continually running through it. *A priori*, therefore, it seems almost certain that the sudden fall is due to the whole dose being at once thrown upon the cardiac viscus, and that the rise occurs so soon as the concentration of the poison is destroyed by diffusion through the circulation. Further, as I have experimentally found that the fall is in no wise dependent upon the nerve-centres, but occurs after section of the cord and after division of the pneumogastrics, it appears to me very certain that the phenomenon is due to a direct action of ergot upon the heart.

If the rise of arterial pressure produced by ergot be due to centric spasm, it would seem as though injection of the drug into the carotid, *i.e.*, seemingly into the brain, ought to induce an immediate rise of the arterial pressure, followed by a fall when the heart felt the effect of the drug. It is very plain, however, that in such experiments as these we have a very complex problem; that the result is due to such a balancing of actions that any irregularity of circulation must produce a very disturbing effect. I have performed two experiments bearing upon the matter. They are as follows:

Experiment VII.—A stout terrier. All the injections made into the carotid, with Rosengarten's ergotin.

TIME.	PULSE.	ARTERIAL PRESSURE.	REMARKS.
0 12 m.	150	130-135 140-150	Six grains. Dog at once gave a brief convulsive and shuddering struggle.
12 m. 4 s.		185	
12 m. 8 s.		125-185	

TIME.	PULSE.	ARTERIAL PRESSURE.	REMARKS.
12 m. 15 s.		100-140	Twelve grains. No sudden rise followed.
12 m. 45 s.		60-85	
13 m.		90-120	
14 m.	150	150-160	
21 m.		145-150	
22 m.		20-30	Three grains.
23 m.		105	
26 m.	123	155-160	
46 m.	129	175-178	

Experiment VIII.—A very small terrier. Injections all practised into the carotid.

TIME.	ARTERIAL PRESSURE.	REMARKS.
0	110-145 Rose immediately to 165, and then almost at once fell down to 50 and below.	Four grains. Dog at once gave a howl, and convulsive shudder or struggle.
20 m.	110-120 Fell at once to 20, without previous rise.	Six grains. Dog quiet.
30 m.	130-135 After each injection no rise, but a fall from 110-80 to 60-40; pressure 15 sec. after each.	Injected, at intervals of 20 seconds, four injections of three grains each.

In these two experiments the results were strikingly similar: the first injection in each was followed by an instantaneous very decided rise of pressure, followed, after a very brief interval, by the usual fall; whilst the subsequent injections in no case caused a rise of pressure. Whether the first rise was directly caused by the drug, or was simply produced by the violent effort the dog made, must, I think, be considered doubtful.

A MILD CASE OF CEREBRO-SPINAL MENINGITIS FOLLOWED BY BLINDNESS.

BY CHARLES SHAFFNER, M.D.

THE following case is of interest on account of the unexpected and unfortunate sequelæ:

I was called on March 16 to visit Eugene H., a bright, chubby little boy, six years old, and apparently of good constitution, whom I found suffering with headache, tongue coated with a whitish fur, constipation, tendency to nausea, and high fever. He had been complaining with these symptoms for about four days, and soon grew worse, with severe occipital headache, rather marked retraction of the head, tendency to internal strabismus, which was fully developed in a week, but lasted only a few days, with equally dilated pupils; coat on tongue turned brown, no sordes, rather obstinate constipation, and tendency to nausea. I always found his lower extremities flexed. He had subacute tendinum, slight pains in arms and legs, but no convulsion, was very restless, sleepless, and slightly delirious at night, but in daytime was crabbed, and only desired to be let alone.

In two weeks he was convalescent, when we discovered that he was almost blind; he said, "I lost my eyes when I was sick." He then complained of pain over his eyes, and this, with some dilatation of the pupils, was all that called attention to the eyes.

He is now in full convalescence, but has only slight light-perception in both eyes.

Dr. Strawbridge examined the eye-ground, and found "choked disk," giving a diagnosis of impending atrophy of the nerve.

Dr. J. Lewis Smith, of New York, in his article on "Cerebro-Spinal Fever," in *Amer. Jour. Med. Sci.* for October, 1873, mentions, as sequelæ, strabismus, conjunctivitis, ulcer of cornea, cloudiness of cornea, and cataractous lens. There has never been any conjunctivitis, iritis, or keratitis in my case, and at present the media are clear, but the pupils still dilated. The hearing was also very imperfect for a few days.

The treatment was chiefly bromide of potassium and quinine, with citrate of potassium as a febrifuge. Calomel and rhubarb were used to relieve constipation. Sinapisms were placed on the extremities. He is now taking cinchona and iron, with cod-liver oil.

Dr. Albert G. Heyl made a careful ophthalmoscopic examination, and has made the following report: "On account of the age of the child, it was impossible to obtain a correct record of the amount of vision, or properly to estimate the extent of the paralysis affecting the muscular apparatus of the eye: the former, judging from the movements of the child, was considerably impaired.

"There was no ptosis. Both recti externi were paralyzed, especially the left, giving rise to marked internal strabismus on that side. The third nerve on the left side was also implicated, as was evidenced by the left cornea occupying a higher position than the right. Both pupils were widely dilated. Media perfectly clear. In the right eye hypermetropia $\frac{1}{2}$, in the left hypermetropia $\frac{3}{4}$, existed. The fundus of each eye presented a marked example of the 'choked disk': the distinct swelling of the papilla, its clouded, reddish appearance, the radiating stripes along the course of the nerve-fascicles, and the dilated and tortuous retinal veins, were all sufficiently pronounced in character to render the diagnosis easy. There were no ecchymoses. The apex of the left papilla was best defined with a +10; that of the left, with a +12."

TRANSLATIONS.

ENDOSCOPIC EXAMINATION OF THE URETHRA AND BLADDER.—Dr. J. Grünfeld, an assistant of Prof. Sigmond, of Vienna (*Wien. Med. Presse*), being struck with the fact that the results from the use of the endoscope in the diagnosis and treatment of diseases of the urethra have not been commensurate with those attained by the use of the laryngoscopic mirror, sought to devise some simpler form of apparatus than the instrument of Désormeaux and its modifications. He finds that he can make satisfactory examinations of the urethra by means of an ordinary catheter with some modifications, to which he gives the name of urethro-scope. In the construction of this, two objects have to be borne in mind: the instrument must bear a proper relation to the individual peculiarities of the case, so as not to injure the organs under examination, and provision for adequate illumination must likewise be made. Instruments, therefore, of varied form will be needed, but they are all made of metal, blackened upon the interior, and provided with a funnel-shaped expansion at the end which is exterior to the urethra.

The simplest form and the one which is available in the largest number of cases is a straight tube, the end of which is closed with a plain plate of glass. This should not be placed vertically to the axis of the tube, but at an angle, so that the rays of light used for illumination will not be thrown back from it. The tube of the instrument must be carefully oiled before introduction. Dr. Grün-

feld uses for illumination either sunlight or that of an ordinary argand lamp, throwing the rays of light into the funnel-shaped end of the tube with the ordinary laryngoscopic mirror, which he employs either upon the forehead or in preference held in the hand. The mucous membrane of the urethra can be examined from the meatus urinarius to the orifice of the bladder, and by thrusting the tube still farther onward the surface of the posterior wall of the bladder itself comes into view, and by moving the instrument different fields of view are obtained. He uses also a second form of the urethroscope which is not so available for making examinations as for topical applications, in which the end of the tube is not shut in by a plate of glass. When this is to be introduced, a conductor must be first placed inside the tube, as without this precaution the operation causes pain. In these two forms of the instrument the mucous membrane of the urethra is presented to view in the funnel as a cone with folds converging to the centre of the field of view. Pressure excited at the edges of this tube may give rise to some disturbance in the capillary circulation, and thus cause some change in the natural color of the mucous membrane. To obviate this pressure and consequent source of error, a third form of the instrument was devised, in which the end of the tube is closed, and at a short distance from the end there is a window in the side, closed with a plate of glass. Beneath this there is a small mirror at an angle of forty-five degrees, so that the light may be reflected parallel to the axis of the tube. There is also a fourth form, in which the catheter is curved, the window being made upon the convexity of the curve. These windows can be made of plain glass, or of glass which has been ground to correspond to the convexity of the catheter. The catheter employed corresponded to Nos. 18, 22, and 24 of Charrière's scale. The examinations are best made with the patient lying upon the back, with the thighs flexed; but if the outer half of the urethra is to be examined, the patient can be in a standing posture. This simple apparatus certainly presents many advantages over the complicated machinery of the endoscope; the special illuminating facilities are not required, and the introduction of the catheter is not so painful to the patient.

W. A.

FR. MOSLER (*Berliner Klin. Wochenschrift*) thinks that the introduction of large quantities of fluid into the intestine is advisable under the following conditions, in addition to those suggested by Simon: 1, in dysentery, when, after the irritating discharges have been washed away, solutions of a disinfecting and astringent character may be introduced; 2, to increase the amount of bile in various forms of icterus, and also to favor its expulsion; 3, to wash out any remains of tape-worm that may remain after its partial expulsion, and also for the removal of seat-worms. In the latter case he advises the addition of half a tablespoonful of benzine to every two pints of fluid used.

W. A.

CAUSES OF CRÉTINISM.—Dr. Klebs has made a number of observations with the object of ascertaining, if possible, some at least of the causes which go to produce crétinism in certain districts of Switzerland.

A series of analyses of the water used for drinking-purposes in different localities, compared with the comparative frequency of the disease in such places, seems to indicate the presence of a large percentage of the sulphates of calcium and magnesium as having an undoubted influence in causing the affection in question. —*Archiv f. Ex. Path.*, Feb. 1874.

A. V. H.

PHILADELPHIA
MEDICAL TIMES.
 A WEEKLY JOURNAL OF
 MEDICAL AND SURGICAL SCIENCE.

The Philadelphia Medical Times is an independent journal, devoted to no ends or interests whatever but those common to all who cultivate the science of medicine. Its columns are open to all those who wish to express their views on any subject coming within its legitimate sphere.

We invite contributions, reports of cases, notes and queries, medical news, and whatever may tend to increase the value of our pages.

All communications must bear the name of the sender (whether the name is to be published or not), and should be addressed to Editor Philadelphia Medical Times, care of the Publishers.

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SATURDAY, MAY 16, 1874.

EDITORIAL.

DENTISTRY.

THE amount of angry comment which the little birds of whom Solomon speaks have brought to our editorial sanctum, concerning an article on oral surgery that appeared some time since in our columns, has astonished and, we may add, amused us. The most plausible explanation is to be found in the fact that the members of the profession supposed to have been slighted really know that they are laying claim to a position for dentistry which it does not at present deserve, and which the world does not grant. A condition of extreme general peripheral sensitiveness marks the existence of a spinal or centric nervous weakness in the moral as well as in the physical world, and nothing is so inducive to the production of this weakness as the knowledge that we are claiming or pretending to what we do not possess. The real duke laughs when he is taken for a commoner, but the shoddy duke flies into a passion. When any one knows he is right, he is usually tolerant of discussion. In this innate sense also lie, we suppose, the sources of the self-laudatory speeches which are so abundant at dental conventions. The true Hercules does not deem it necessary to be always proclaiming his strength, or the man of robust health to be constantly telling his friends that he is well.

Whether our explanation of the exceeding sensitiveness of our friends the dentists be or be not correct, the fact remains that dentistry is not looked upon at all by the medical profession as in

the slightest degree co-equal with medicine, that the degree of *doctor* of dental surgery is viewed with a great deal of amusement and a little vexation, and that the claim that dentistry is a branch or specialty of medicine is generally met by internal cachinnations, whatever external behavior the laws of politeness may enforce. These may be hard things to hear, but we hope our dental friends will not be angry; they are not the opinions of the *Times* or of its editors, but are the simple facts of the case,—facts which it behooves those who wish to see dentistry placed upon a higher plane to recognize.

We are not now speaking of dentists, but of the dental profession. There are many dentists of the highest culture and of the most worthy social characteristics, precisely as there are such men in all of the higher walks of life; but certainly, even if dentistry in the abstract is worthy of a position as a medical specialty, the living, concrete dentistry can only gain such honor by a complete reorganization of the profession.

The dentist formerly acquired his art in the office of his predecessor, and it was not considered necessary for him to study in any more extensive sphere. As time went on, and the lucrateness of the calling attracted more and more able and cultured men, aspirations rose higher and higher; dentists began to demand a more extensive education, and the dental colleges were founded. But now another step is being attempted, and a claim is put forward for a recognition of dentistry as a medical specialty.

In considering this claim, the great difference between dentistry and such real medical specialties as ophthalmology must not be lost sight of. In the first place, dentistry originated, or at least has grown up, entirely outside of the medical profession, whilst the true specialties have originated and been cultivated solely inside the profession. In the second place, dentistry constantly asserts itself as something outside of the medical profession, whilst the specialties do not. Every dentist announces himself as such upon his door-plate or window-sill, whilst a ban is laid upon the man who labels himself in the same way as an oculist or an aurist. In the third place, the dental profession is saying to the world day in and day out, by its actions, that a general medical culture is of no use, or at least is not a necessity to the dentist, whilst the specialist insists that before special studies are undertaken the candidate must have had a thorough general medical education.

The dental colleges have been a great aid to the dental profession, and, indeed, whatever claim den-

tistry really has to be called a profession rests almost exclusively upon their labors. Yet they are an insuperable bar to its ever becoming a medical specialty, and the degree of D.D.S. is the badge of a partial culture which must shut out from the medical ranks every one who wears no other insignia,—a fact of which the dentists seem painfully aware, since so soon as any one of them takes a degree in medicine the D.D.S. disappears in a twinkling from door-plate and window-shutter. So long as the dental profession, by their deeds, say that such half-culture is all that is necessary for a dentist, why should the members complain if the world and the *Times* agree with them and assign to dentistry the position which it at present holds?

There is only one way by which a higher position can be achieved, and the first step is the abolition of the dental colleges and an enforcement of the idea that a general medical education must precede the special one. If we are correctly informed, at a recent meeting in New York, Dr. Robert Arthur, a prominent dentist of Baltimore, proposed that students entering the specialty should graduate in medicine and afterwards pursue special studies under suitable instruction, or else that the student should select such schools as afforded, during the summer, special courses of lectures, and other facilities for studying dentistry.

The latter seems to us a most happy idea, and, if dentists are to be doctors, the plan suggested is the most feasible. It appears to us that it would certainly be to the interest of the medical schools to offer the facilities; and although, as stated in a previous editorial, we do not perceive the necessity for this general culture in those who practise dentistry, and doubt the possibility of enforcing any expensive education upon the students, yet it may be that on trial we shall be found to be mistaken. This much we can assure our friends the dentists, that just so soon as they comply with the universally adopted rules of the medical profession, and measure up to its standard, that profession will receive them with open arms,—not because they are dentists, but because they are doctors.

THE little town of Brives, in France, has experienced a sad calamity, in the form of an epidemic of syphilis. During last year it was found that many women recently confined were affected with a strange disease, which was soon recognized as specific. When the nature of the malady was discovered, the town was almost convulsed with domestic disturbances,—husband against wife, wife

against husband, family against family, as men and women strong in their own innocence accused each other of infidelity to the marriage-bed. The number affected was quite large: fifteen women, nine husbands, and ten children are known to the authorities, whilst many, it is believed, have concealed from the world their infection, physicians of eminence asserting that they knew of such cases. After a time of great disturbance, the cause of all the trouble was found to be a midwife, who had contracted a chancre upon her finger in the discharge of her duties, and had carried the poison from house to house. After the discovery the moral thunderstorm subsided, and nothing of evil, beyond the wrecked victims, remained.

THE human intellect passeth human understanding. If it reaches up almost to the infinite, so does it sink down to the infinite,—science and folly, twin brethren, dwelling in that wonder of wonders, the human brain. The nearest approach to the infinite of folly we have as yet met with is in some specimen pages of Allen's Encyclopædia of Homœopathic Materia Medica; the provings of aconite yielding some two thousand symptoms, including accurate visions of friends hundreds of miles away.

A TELL-TALE STRAW.—Among the prizes at a recent homœopathic Commencement was a hypodermic syringe. Another straw.—In the journal to which we are indebted for the above information we notice the advertisement sheets chiefly occupied by Tilden & Co.'s price-list of their pills and granules. "As honest as a homœopath" bids fair to become a proverb.

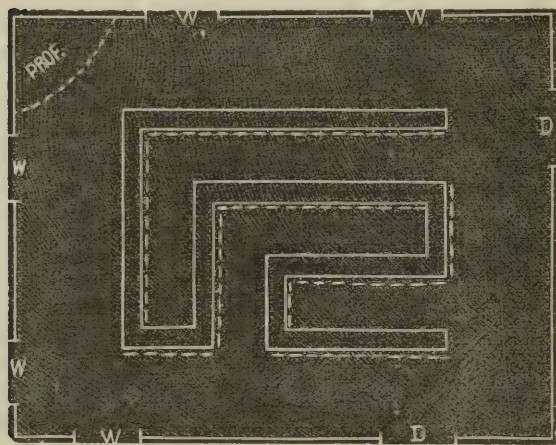
CORRESPONDENCE.

THE following is an extract from a letter to the editor, written at Breslau, East Prussia, by a highly-gifted physician now pursuing his studies abroad. It was not written for publication, but has been so entertaining to the editor that he has thought it would interest the readers of the *Times*.

BRESLAU, EAST PRUSSIA, April 9, 1874.

Among the men that most interested me in Berlin was Virchow. He is the best lecturer that I have ever heard. His utterance is clear, language simple and elegant, manner usually quiet, but at times animated, and, with the exception of a little drawl now and then, his elocution may be said to be almost perfect. He gives one the impression that his thoughts and words

come freely and abundantly, and that all he has to do is to *pour* out his ideas in any style that he sees fit. Indeed, he talks in very much the style that his Pathology is written (it reads much pleasanter in German than in English), and this is more noticeable in his lectures on *General Pathology*. His skill as a speaker is no doubt very much dependent upon his duties as a member of the German Parliament, which, unfortunately for the students of pathology, keep him very busy. He lectures three times per week on Special Pathology and four times on General. The lectures on Special are supposed to begin at nine A.M. and last till eleven, but, as he is never punctual, they are very much shorter. His irregularity has caused a great deal of dissatisfaction among the students, and one morning that he was later than usual they filed out of the room as he appeared at the door. That was an extraordinary thing for such decorous creatures to do. The Pathological Institute has been lately refitted, and the room devoted to his morning lectures is lofty, well lighted, and handsomely painted in distemper. The arrangement for the students is a very convenient one: it enables all to see, and each in turn to examine the specimens without trouble. The form of the table you may get from this enclosed diagram. Along the front



edge of the table is a little railroad-track, three or four inches wide, and sunk two inches below the surface. The wooden trays holding the specimens are readily fastened by a few turns of a thumb-screw to little brass platforms with grooved wheels which fit this track, and can be easily pushed along from one student to another without taking too much attention from the lecturer. In one corner of the room is a platform, upon which he stands, having at his left a large movable (elevated or lowered) blackboard, and at his right a sort of side-board, convenient for small preparations. His use of the blackboard is constant, and from long practice his drawings are easy and skilful, and are a great help to his lectures. There is an elaborate description of this lecture-room in the *Berliner Wochenschrift* (I don't remember the number). If you want a good nap after listening to Virchow, go to Frerichs's auditorium. It is on the second floor of the hospital building, and is a long

low room capable of seating about one hundred and fifty students, the seats rising one above the other towards the back of the room, and it opens at one end into the wards, and at the other into a hall-way where are hooks for students to hang their coats and hats. The room is usually full, and, it not being well ventilated, the air in a few minutes becomes almost suffocating. Happily, the "academic quarter" cuts his lecture-hour down to forty-five minutes. His station is in the centre of the little arena between the rows of seats and the folding-doors leading into the wards. A few feet from him on either side are usually seated in a semi-circle a number of doctors, who, together with the students, always rise with great ceremony when he enters. A patient in bed is wheeled or carried in from the neighboring ward, and, addressing the student whose turn it is to appear in the arena, he begins. He speaks in a low, melancholy tone, and rarely raises it, so that after a while it becomes very monotonous. His manner is languid, and his enunciation (to a foreigner) very indistinct. It seems to be a great effort to him to talk, and even when he makes his examinations his motions are slow. Now and then he condescends to a witticism, and the rustle with which his auditors receive it, and which breaks the "awful quiet," has something *solemn* about it. Precisely at twelve he ceases. The student to whom his remarks have been addressed has the privilege of following the case to its termination,—of entering the wards day after day to note condition, treatment, etc., till either recovery or death.

Traube, whose lectures upon diseases of the chest were very interesting, is a far better speaker than Frerichs. Although somewhat older than the latter, he has much more vivacity. He keeps his ears closed with cotton, in order (it is said: I can't vouch for it) to preserve his acuteness of hearing. And he believes in Selters Wasser with warm milk to relieve the cough of phthisis and pneumonia. This remedy, by the way, is very much used, and if the milk is of the right temperature—not too hot, nor lukewarm—it is quite agreeable. I have tasted it repeatedly. Some persons object to it at first, but gradually acquire a liking for it. Are you interested in the surgical clinics? At Langenbeck's you will find everything, from the pulling of a tooth up to the resection of joints. It is a very poor clinic for every one but the student who is called into the arena. The professor has so many assistants that only now and then can a good view of the patient and operation be obtained, and, besides, the course and result of the case are not observed by the students. Bardeleben's clinic is better. This is in a large new brick building in one of the quadrangles of the Charity Hospital. It is a two-story building, with four wards, and a corridor on each story. The upper story belongs to Bardeleben, who has also an auditorium off the corridor, and the lower story to Wilms. The latter, by the way, is said to be the most skilful operator in Germany. Bardeleben meets the students in the wards at 8.30 A.M., and they make the rounds with him. The dressings are removed and renewed in their presence, and he com-

ments or calls their attention to practical points as he passes from patient to patient. At ten he enters the auditorium, and patients for operation are brought to him. This is called his lecture on operative surgery. At eleven he makes a pause for about fifteen minutes, during which the room is cleared, and a blackboard is brought in, and then he lectures till twelve on the science of surgery. Is not that admirable? And all this takes place every day. He is a firm believer in the antiseptic treatment of wounds, and the method of Lister is carried out with great exactness. Here also in Breslau at the surgical clinic the method is employed, but not with the same care. They here use the warm bath as a hygienic measure with greater frequency and regularity than I have elsewhere seen. For instance, a man suffering from pyæmia was daily placed for fifteen or twenty minutes in a warm bath, and always appeared brighter and better for it; and this was continued up to the day of his death. It was employed without any reference to his temperature, etc. For the reduction of temperature in surgical cases quinine is firmly believed in. As an illustration, Dr. Viertel, Prof. Fischer's house-surgeon, showed me the temperature-table of a patient who had been brought in suffering from a severe contused wound of the left hand, in which sloughing took place. On the day after admission his temperature rose from 38° (Celsius) to 40° (about 105° Fahrenheit). He received at night two grammes (about thirty grains) of quinine dissolved in water, in divided doses,—i.e., he took half the quantity, and then in half an hour after the remainder. The next morning the temperature was 37.5°—nearly normal. In three or four days there was another rise to 40°, and the dose was repeated. Again the temperature fell to 37.5°, and never rose above 38° after that, but has remained at normal 37° ever since. This was the sixteenth day after admission, and the wound was nearly healed. I don't attach much value to that as an observation, for I don't know the condition of the wound, etc., on the days of elevated temperature, but the case was shown to me as an illustration of the power of quinine, and so I give it to you. I am surprised at the amount of clinical material in this city. It is a university town of only 171,000 inhabitants, and yet they have a large hospital containing nearly one thousand beds, besides a number of others of from one hundred to two hundred beds belonging to "deaconesses" and "sisters" and "brothers" of various orders. Very many of the patients come from the province of Silesia, and that may account for it. The mortality also is *very satisfactory*, for there are about three post-mortems per day, and an abundance of pathological material. Cohnheim is the Professor of Pathological Anatomy. At present he is out of town, seeking, in a change of air, relief from a troublesome laryngitis. It is whispered that he has phthisis. It is too bad, for he is a very enthusiastic teacher. Did you know that Rindfleisch had left Bonn and gone to the University at Würzburg? The Vienna people are looking for some one to take Rokitsansky's place. They made a big offer to Von Recklinghausen, which

he refused, preferring to remain at Strasburg. They offered him 12,000 gulden (\$6000) per annum, a share of the students' fees equal to about 4000 gulden more, also to build him a new and complete Pathological Institute, and to give him four or five assistants.

PROCEEDINGS OF SOCIETIES.

PHILADELPHIA COUNTY MEDICAL SOCIETY.

A CONVERSATIONAL meeting was held February 11, 1874, at 8 o'clock P.M.

THE PRESIDENT, DR. W. L. ATLEE, in the chair.

Dr. WASHINGTON L. ATLEE called the attention of the Society to a little instrument in frequent use by the physician and surgeon,—viz., THE CAUSTIC-HOLDER. After having tried every form of holder, including hard rubber, found in the shops, and having one after another destroyed by the corroding influence of the daily use of nitrate of silver, he had Mr. Gemrig to construct one, under his directions, of platinum and gold, which answered an admirable purpose. This instrument defied the destructive action of the caustic. But still there was one defect in common with all caustic-holders,—viz., *after using up the stick of caustic there still remained in the grasp of the holder a small end that could not be conveniently utilized, and was necessarily wasted.* Frequently, in attempting to remove this remaining portion from the holder in order to substitute it by a longer piece, it would crumble up, and many of the particles would remain strongly adhering to the instrument, requiring a loss of time properly to remove them. Generally, however, these waste ends were removed without breaking them, on doing it immediately after the holder was used and before it had time to dry. Having occasion to use a large amount of solid nitrate of silver, these waste ends accumulated to a very great extent, and, as they were too costly to throw away, he endeavored, by several methods, to utilize them. He finally adopted the following simple plan,—viz., *a piece of hard rubber was melted (like sealing-wax) over a flame, and the end of a lead-pencil charged with a small portion of it. The caustic was pressed on this while still soft, and in a few moments the bond of union was perfect, and the holder ready for use.* He soon found this holder economic to the greatest degree, as it enabled him to use up even the smallest particles.

For office use Dr. Atlee has several of these holders charged with different-sized pieces of caustic, from the smallest fractions to pieces two and three inches long. In using these holders the caustic itself will break rather than separate from the cement. After using up the caustic, it will be found that the rubber will have become deteriorated and unfit for further use. It must then be melted and wiped from the handle, and a fresh supply added. For pocket use Dr. Atlee still uses his old platinum holder, but in a different way. He places in its grasp a cylindrical piece of wood about one inch in length, to which he seals the caustic in the way above stated. He took from his pocket his caustic-holder and exhibited it, stating that he had just returned from a journey of twenty-three hundred miles, and that the attachment still remained unbroken.

Dr. Atlee stated that he had such an unlimited and extended experience in the use of this holder that he could recommend it without hesitation as the most simple, the most satisfactory, and the most economical instrument in use. He has used no other for

the last fifteen or sixteen years. During this period he had repeatedly brought the plan to the notice of his brother-practitioners.

The doctor brought with him several holders, such as he uses in his office, in order to exhibit them to the Society. They were brought here already charged, as he was in the habit of using them. But upon taking them from his pocket and unwrapping them he found the longer pieces of caustic broken. On examination, however, it was noticed that they had not separated from the bond of union. Some of these holders were ordinary pen-holders, and sticks of similar character.

He said that he would now instruct them how to make a holder; and, pulling from his pocket a hard rubber ring-pessary, he remarked that he would startle the members of the Society by stating that he would now show them the best use, as a general rule, to which it could be applied. Heating a part of it over the gas-light until it was softened, he then charged the end of a stick with a small quantity, sufficient to form a bond of union between it and a piece of caustic, and pressed the latter against the charged point. It soon hardened and formed a firm union. He purposely gave it an angular inclination, to show that with his simple plan any direction can be given to the caustic to suit the convenience of the operator, which he thought was an additional advantage over every other instrument.

Dr. ATKINSON said he hoped that Dr. Atlee would at an early day give his views as to the employment of pessaries. He thought the gentleman did not entirely discard them.

Dr. B. LEE then read a paper on the "Practical Identity of True Croup and Diphtheria."

Dr. HAMILTON said that notwithstanding the ability shown by the lecturer in endeavoring to render positive, or at least probable, the identity of diphtheria and croup, the evidence in opposition to this view he regarded as so definite and strong in character as to be wellnigh or quite irrefutable. A few clearly-marked points of divergence may be mentioned. Croup prevails occasionally in an epidemic form; but even here the more frequent attacks can generally be referred to some appreciable exciting cause in close relation with a peculiarity of the season or state of the weather. In diphtheria many severe epidemics have occurred where this relationship, if it existed at all, has scarcely been noticed. The number of persons attacked in an epidemic of croup, whether in a community or in a family, is small when compared with what frequently happens in diphtheria, so that the latter is found to be in many cases beyond all comparison more destructive in its progress than is ever witnessed in the former disease. To effect this result we may perhaps rationally assign, as the causative influences, contagion, and some peculiar telluric and atmospheric condition of an occult character. The prominent symptoms in croup are local, succeeded, of course, in violent or fatal cases, by systemic disturbances indicative of an untoward issue. In diphtheria, constitutional symptoms are, as a rule, first observed, and continue throughout the attack, whilst, significantly enough, in some cases the local affection is but slightly developed, or wanting. The croupal condition of the respiration noticed in some attacks of diphtheria is explained by the anatomy and physiology of the parts invaded; yet a severe and wide-spread epidemic must be admitted to exert an influence upon other co-existent disease. Whilst there are no special sequelæ to croup, diphtheria, on the contrary, is in this respect pre-eminently conspicuous in the paralyses which have attended some epidemics of the disease, affecting sometimes twenty-five per cent. of those attacked. Albuminous urine in croup is exceptional; in diphtheria it is common, indicating an essential difference in the pa-

thology of the two diseases. Other points of divergence may occur to and be expressed by members.

Dr. J. COLLINS agreed with Dr. Hamilton that there was a difference in the two diseases. The fact that we had abandoned treatment did not show that it was otherwise. He had heard Dr. Keichline say that many years ago he had used chlorate of potassium and tonics. He himself was very fond of sulpho-carbolate of zinc topically. He uses the sulpho-carbolate of zinc in the strength of $\frac{3i}{\text{to}}$ $\frac{3i}{\text{for}}$ for the throat-trouble; and in gonorrhœa two to five grains to the ounce. The doctor questioned the propriety of the word "orthodox."

Dr. LEE agreed with Dr. Collins that the word "orthodox" in the connection in which he had employed it was liable to misconstruction, and thanked that gentleman for the opportunity of making an explanation in regard to it. He intended to describe by it neither the opinions nor the practice (especially not the latter) of individual members of the profession, or even of the great mass of the profession,—the active working practitioners of the day,—but rather that traditional lore which is handed down from generation to generation in our systematic text-books. Every writer of a system of medicine or surgery has a thorough knowledge of some one branch or department to which he has given special attention. On this subject he speaks from experience, and his teachings are practical and useful. On all others he but reproduces, often unintentionally, the dicta of his professors, or copies from the systems of others. Wishing to make his work an enduring monument to his fame, he must mould it into a grand symmetry. He must have a central theory around which everything must crystallize, to which everything must conform. Such stubborn facts as cannot be made to square exactly with his preconceived plan must be kept out of sight or explained away, and hence the mass of the volume becomes partisan and misleading. Leaving out of view the exacter fundamental departments of anatomy, physiology, chemistry, and materia medica, he doubted whether the influence of such works was not, on the whole, injurious. He was confident his experience was not singular, that much that he had learned in his student-days he had been obliged to unlearn as he found himself face to face with disease. It was an open question in his mind whether it would not be better to place in the hands of the student earnest practical monographs than to cram him with these sifted compendiums which aim to do all his thinking for him.

Dr. ATKINSON thought that monographs by the masters in the profession were far preferable to the voluminous text-books. He believed that if the valuable papers read before this Society were published in pamphlet form it would reflect credit on the Society and be made to pay.

GLEANINGS FROM OUR EXCHANGES.

RETENTION OF URINE (*Medical Record*, March 2, 1874).—Dr. S. Fleet Speir reports a case of retention of urine from enlargement of the prostate, occurring in a man æt. 64. Repeated attempts at catheterism having failed, the bladder was emptied by means of an aspirator, and this operation was repeated fifteen times without causing the slightest discomfort or injury. Internal urethrotomy was performed, although there was no genuine stricture, and was followed by the introduction of a catheter, which, after some difficulty caused by obstructing mucus, was found sufficient to empty the bladder. Dr. Speir calls attention to the great accumulation of mucus that may take place in

the bladder after repeated tapping with the "aspirator." The upper portion of the urine is usually drawn off (the patient lying upon the back), and there is a constant accumulation or deposit of mucus and salts at the bottom of the bladder; and in cases of vesical irritation or inflammation it may become *very dense and tenacious*, obstructing the eye of the catheter and giving rise to the suspicion, on the part of the surgeon, that his catheter has not reached the bladder, or that there is but little urine present, when in fact the reverse is true, and all that is needed is a sufficient force to compel the thick mucus to pass. In cases where repeated tapping is likely to be needed, the bladder should be injected through the tube of the aspirator, and the fluid withdrawn again by the same means, thus preventing the accumulation of mucus.

RESEARCHES ON THE EFFECT OF FOOD ON THE COMPOSITION OF THE BONES.—H. Weiske and E. Wildt (*Zeitschrift für Biologie*, 1873, Band ix. Heft iv. p. 541), in a series of investigations carried on upon goats last year, showed that although the withdrawal of lime or of phosphoric acid from the food of adult animals led to fatal consequences, yet that it had little or no influence on the composition of the bones, and, in particular, did not make them more friable. The present series of researches was made with a view of determining whether any such influence was exerted on the bones of young animals. The animals selected on this occasion were Southdown lambs, about ten weeks old. One of these was fed upon food poor in phosphoric acid, a second on food poor in lime, and a third on normal diet. After the lapse of fifty-five days, various bones were analyzed, and the general result was, that just as in adults so in young animals: no remarkable change was produced in the composition of the several bones by the difference in the diet, or, in other words, the composition of the bones is independent of the nature of the food. The bones were, however, stunted in their growth.

DRAINAGE IN CHRONIC CYSTITIS (*Virginia Medical Monthly*, April, 1874).—Dr. Hunter McGuire reports a case of chronic inflammation of the bladder, of eight years' standing, in a woman *æt.* 41 years. He introduced a piece of fine gum tubing, perforated at the end, and allowed it to remain in the bladder for six weeks, it being withdrawn only for purposes of cleansing, or for the substitution of new pieces in place of the old. During this time the patient was kept in bed, and the urine collected in a urinal; but at the end of that time the free end of the tube was fastened to a gum bag which was attached to the patient's thigh. She wore the tube for about four months, constantly improving. When it was withdrawn, she had at first complete incontinence of urine, but the bladder gradually recovered its power, and a complete and permanent cure resulted.

VOMITING AND HÆMATEMESIS FROM CONSTIPATION (*The Lancet*, March 28, 1874).—Dr. Ogle reports the case of a hysterical girl, in whom obstinate and almost constant vomiting, with profuse hemorrhage, was found to depend upon constipation. Under the use of purgatives—calomel and jalapin—and small doses of sulphate of magnesia, with enemata and suitable mild diet, all symptoms by degrees disappeared, the pain being greatly relieved by hot spongio-piline saturated with laudanum applied to the abdomen, and the vomiting by hydrocyanic acid draughts.

RESECTION AS A REMEDY FOR ABDUCTION OF THE GREAT TOE, HALLUX VALGUS, AND BUNION (*Medical Record*, April 15, 1874).—Dr. A. Rose details a number of cases in which resection was performed, and concludes therefrom that resection of the head of the first

metatarsal bone for abduction of the great toe is a safe operation, when, as after-treatment, submersion in warm water is adopted.

Resection is equally safe as, and furnishes a more useful limb than, amputation.

Resection in old and obstinate cases of hallux valgus is to be preferred to orthopædic appliances.

Finally, resection, properly made, leaves the limb without apparent mutilation, and in a condition as useful as the healthy and sound foot.

STRICTURE OF THE URETHRA (*New York Medical Journal*, April, 1874).—In concluding a long and able paper on "Urethrotomy, External and Internal," Dr. Fessenden N. Otis makes the assertions that stricture, as ordinarily met with, is absolutely within the reach of curative measures; that if completely divided, and this division maintained until healing of the parts has occurred, no recontraction can ever take place; and that the division of stricture is not more hazardous, to say the least, than rapid, permanent, or even temporary dilatation.

He says stricture may be present before difficulty in urinating occurs; it is always present when gleet is present,—gleet, as a rule, meaning stricture. Dilatation of strictures is, at the best, but a temporary expedient,—valuable in close stricture when urination is interfered with and dividing-instruments cannot be introduced; but dilatation is not only without permanent value, except in such cases, but it is pernicious, inasmuch as, while it is never curative, it takes the place of curative measures. He concludes by asserting that nothing short of complete division of strictures can ever result in radical cure.

GONORRHOEA, GLEET, ETC.—We have recently known a number of very obstinate cases of gleet relieved by the introduction of a catheter, smeared with mild zinc ointment, once or twice per day. Many recent cases of gonorrhœa are much relieved by the same means, with the addition of a little carbolic acid, sulphate of zinc, or nitrate of silver. An injection containing about two grains of sulphate of zinc to the ounce of water, and the whole made thick as cream with finely-powdered golden-seal (*Hydrastis Canadensis*), is deemed worth from \$500 to \$1000 by those who have been very speedily cured by it. At least, such is their verbal estimate of its value. It is thrown into the urethra, and allowed to remain as long as it will.—*Medical Times and Gazette*.

FOREIGN BODY IN THE BLADDER (*Medical Record*, March 2, 1874).—In removing a piece of glass tube from the bladder by perineal section, Dr. George C. Smith resorted to the ingenious device of coating the jaws of the forceps with molasses candy, thus securing adhesion and protecting the glass from fracture, and also, the candy being soluble in the urine, not leaving behind any nucleus for future calculus.

THE LOCAL TREATMENT OF CARBUNCLE (*The Lancet*, March 28, 1874).—Peter Eade, M.D., strongly recommends the local use of carbolic acid in carbuncle. He has employed a solution of one part of the acid in four or five of oil or glycerin, and in those parts with which it came in actual contact it had a marked beneficial effect, retarding the circumferential spread and checking or aborting the carbuncular inflammation.

CHLORAL IN TETANUS (*Indian Medical Gazette*, March 2, 1874).—Dr. John Meredith reports a case of traumatic tetanus successfully treated with chloral hydrate, rest, quiet, and nourishment. The chloral was given thrice daily, in twenty-grain doses, and seemed to control the spasms effectually.

MISCELLANY.

THE BURGLAR AND THE SKELETON.—A "skeleton in the closet" is not generally considered a pleasant thing to have, but a recent occurrence in Greensburg, Pa., shows that it may sometimes answer a good purpose. A burglar broke into a physician's office in that town, and, opening a closet (while his companion with a dark-lantern was in another part of the room), got his hands between the jaws of a skeleton, which, being adjusted with a coil spring and kept open with a thread, closed suddenly on the intruding hand by the breaking of the thread. Startled at being thus seized, he uttered a faint shriek, and when his companion turned the lantern towards him and he beheld himself in the grim and ghastly jaws of Death himself, he became so overpowered by fear that he fainted and fell insensible to the floor, pulling the skeleton down upon him, and making so much noise that his companion fled immediately. The doctor, alarmed at the noise and confusion, hastened into the office, and secured the terror-stricken burglar, still held by the skeleton.

STUDYING FOR A PROFESSION.—A young independent New Englander, who had an eye on No. 1, was studying for the ministry in one of the one hundred and eight theological schools in the United States, and when about to graduate he found out that this was one of the worst-paid professions, as people in general care more for their bodies than for their souls, so at the nick of time he changed his mind, and studied medicine in one of the ninety-two medical colleges. When almost through this very useful course of training, he discovered an important fact, namely, that people care more for their pockets than for their bodies, or for anything else. This settled the matter for him; he again changed his mind,—this time definitively: he went to study law.—*Manufacturer and Builder.*

RABIES AND HYDROPHOBIA.—Two fatal cases of hydrophobia are reported in the *Sheffield Daily Telegraph*, both occasioned by bites from a cat. One case, that of a female domestic servant, aged thirty-two years, occurred in this wise. While engaged in toasting some bread on Christmas day, the cat attacked her, fastening upon the left hand, and the animal was dislodged with difficulty. The day following Christmas day, the same cat attacked a man, wounding him, and he died of hydrophobia on the 22d of January. The young woman first bitten did not manifest symptoms of hydrophobia until the 29th of March, and she died on the 31st.—*London Lancet.*

DR. DAWSON has sold his proprietorship of the *American Journal of Obstetrics* to Wm. Wood & Co., of New York, and is to be succeeded by Dr. Paul F. Munde as editor. Dr. Dawson offers an annual prize of \$150 gold, the first subject being "Congenital Deformities, and Diseases depending on Maladies of the Uterus or Membranes." The competing essays must be sent to the publishers (Wm. Wood & Co., 27 Great Jones Street, New York) of the journal on or before

April 15, 1875. The names of the authors must accompany the manuscripts in sealed envelopes, as usual with prize papers.

SPECIMENS of glycerin in crystals were exhibited at the Vienna Exposition. Such a form of this article had been previously considered impossible. When perfectly pure, however, it is said to crystallize readily, and once in a solid state it does not melt except at a high summer temperature, and the liquid thus formed will not re-crystallize on cooling. The process for its preparation is patented, and a secret. In the form of crystals, glycerin is of use only as a chemical curiosity.—*The Tennessee Pharmacal Gazette.*

ACTION OF HUMAN MILK ON PUPS.—M. Depaul refers to the hurtful action of women's milk on pups. He had a bitch which, having pups and sickened, a nurse applied them to her breast, trying to keep them alive, but they wasted and almost died. He has frequently seen instances of the same happen where pups were applied to the breasts to try and elongate the nipple, an application which is often supposed to be a most efficacious method.

THE DRUG BUSINESS IN GERMANY IS WELL GOVERNED.—There is a central organization with nineteen districts, and each has a director. Each district has five circles with a sub-director. Each circle consists of about fifty members, with a circle-president who watches over the members. No chance for irregularity.—*The Druggist.*

OFFICIAL LIST

OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U.S. ARMY, FROM MAY 5 TO MAY 11, 1874, INCLUSIVE.

ABADIE, E. H., SURGEON.—Leave of absence extended sixty days, on Surgeon's Certificate of Disability. S. O. 101, A. G. O., May 8, 1874.

BAILY, E. J., SURGEON.—Relieved from duty in Department of California, and to report in person to the Commanding Officer, Department of the Columbia, for duty as Medical Director of that Department. S. O. 96, A. G. O., May 2, 1874.

COOPER, GEORGE E., SURGEON.—Relieved from duty in Department of the Columbia, and to report in person to the Commanding General, Department of California, for assignment to duty. S. O. 96, c. s., A. G. O.

WRIGHT, J. P., SURGEON.—Relieved from duty in Department of Dakota, to proceed to Carlisle, Pennsylvania, and, on arrival, report by letter to the Surgeon-General. S. O. 96, A. G. O., May 2, 1874.

TOWN, F. L., SURGEON.—Relieved from duty in Military Division of the Atlantic, and to report in person to the Commanding General, Department of Texas, for assignment. S. O. 96, c. s., A. G. O.

WEEDS, J. F., SURGEON.—Assigned to duty at Fort Abraham Lincoln, D. T. S. O. 83, Department of Dakota, April 29, 1874.

TILTON, H. R., ASSISTANT-SURGEON.—Relieved from duty in Military Division of the Atlantic, and to report in person to the Commanding General, Department of Texas, for assignment. S. O. 96, c. s., A. G. O.

BROWN, J. M., ASSISTANT-SURGEON.—Relieved from duty in Department of Texas, to proceed to Philadelphia, Pennsylvania, and, on arrival, report by letter to the Surgeon-General. S. O. 96, c. s., A. G. O.

DE HANNE, J. V., ASSISTANT-SURGEON.—Relieved from duty in Department of the Missouri, to proceed to New York City, and, on arrival, report by letter to the Surgeon-General. S. O. 96, c. s., A. G. O.

WOODRUFF, E., ASSISTANT-SURGEON.—Relieved from duty in Department of Dakota, to proceed to Louisville, Kentucky, and, on arrival, report by letter to the Surgeon-General. S. O. 96, c. s., A. G. O.

DICKSON, J. M., ASSISTANT-SURGEON.—Relieved from duty in Department of the Platte, to proceed to Cincinnati, Ohio, and, on arrival, report by letter to the Surgeon-General. S. O. 96, c. s., A. G. O.

SATURDAY, MAY 23, 1874.

ORIGINAL COMMUNICATIONS.

ON LIGATURES: AN ATTEMPT TO DECIDE ON THE BEST MATERIAL FOR THE LIGATION OF ARTERIES.*

WITH EXPERIMENTS.

BY JOHN R. HAYNES, M.D.,

Philadelphia.

"Quod si illa quoque profluvio vincuntur, venæ quæ sanguinem fundant apprehendendæ, circaque id, quod ictum est, duobus locis deligandæ, intercidendæque sunt, ut et in se cœrent et nihilominus ora præclusa habeant."—CÆLUS, De Re Medicâ, lib. v. cap. 26.

THE plan of this essay comprises a brief sketch of the history of the ligature and its introduction into surgical practice, and an account of the three great classes of ligatures, the *thread*, the *metallic*, and the *animal*. From each class a typical material will be selected for more particular examination and experiment, including *silk* (representing thread), *silver* and *lead* (metallic), and *catgut* (animal ligatures). Finally, an endeavor will be made to indicate which of these substances is best adapted to the wants of the practical surgeon.

HISTORY OF THE LIGATURE.

The practice of surgery previous to the introduction of the ligature presented few inducements to one of tender or fastidious nature. Not the least of its horrors was due to the want of some efficient means of checking hemorrhage. Applications of the actual cautery or some form of the potential cautery, as buttons of vitriol, boiling turpentine, pastes of arsenic, etc., were the principal means employed; but so worthless were they that surgeons feared to perform even unimportant operations, lest death from hemorrhage should result. To avoid this direful termination, injured members were seldom amputated until mortification had ensued, and were then removed by incisions through the dead parts. By some, a large knife, heated to redness, was employed, with the hope that the cauterization would close the vessels as soon as they were divided. Fabricius ab Acquapendente, the tutor of the illustrious Harvey, was in the habit of removing diseased breasts by means of a sharp piece of wood or horn, dipped from time to time in aqua fortis. Guido di Caulico, who flourished at the end of the fourteenth century, amputated limbs by surrounding them with so tight a band that they ultimately dropped off. Well might ancient surgery be termed "a horrid trade."

In the writings of Celsus, who lived in the first century, we find the first mention of the ligature. He gives explicit directions for tying wounded blood-vessels.

The first operation for aneurism was performed by Rufus of Ephesus, about the middle of the second century. The tumor in this case was situated

at the bend of the elbow, and had been caused by a wound of the vessel in venesection.

According to Aetius, who wrote in the sixth century, the ligature was sometimes used in cases of wounds and aneurisms. This author gives the first description of what is known as the operation of Antyllus, for the relief of aneurism.

But no evidence exists to show that the ligature was used in any save exceptional cases. That its application to operative procedures, except occasionally in aneurism, was unknown, is proved by the frequent references made to other methods of checking hemorrhage. Indeed, after the time of Aetius, it seems that it was scarcely ever used, even in wounds and aneurisms. In illustration of this fact, it is related that Albucasis, a celebrated Arabian surgeon, who flourished about the beginning of the twelfth century, refused to amputate the hand of a patient, lest he should die of hemorrhage, and that the sufferer, with commendable courage, performed the operation himself, and survived.

In 1564, the immortal Ambrose Paré re-introduced the ligature, which he had been led to use, he thought, "by the special favour of the sacred Deitie; for," he continues, "I learnt it not of my maisters, nor of any other, neither have I at any time found it used by any." But the surgeons of that day were too well pleased with their hot irons and their caustics to listen to him. Nor did his defence against the malignant attacks which the publication of his invention called forth, in which he spoke of the brief and unsatisfactory references made to the ligature by the ancients, produce a greater effect. Strange to say, the ligature was not employed at all during the next century and a half, and then we find it commencing a very slow progress. Thus, in 1707, among all the surgeons to the Hôtel-Dieu, Dionis was the only one to employ it. In 1739, Heister, the famous German surgeon, recommended its partial use only; while in England, so late as 1761, Mr. Sharp, surgeon to Guy's Hospital, complained that "the ligature was not received with that universal acceptance one would wish and expect."

Since the ligature has come into general use, it has not been free from the attacks of those seeking to introduce new methods of arresting hemorrhage.

Thus, acupressure, first described in 1859, was intended by its inventor, Sir James Y. Simpson, to supersede the ligature. But the latter has not lost its hold on the confidence of the great majority of surgeons, and acupressure is now used only in rare and exceptional cases.

The systematic twisting of arteries to arrest hemorrhage, technically called torsion, has a few enthusiastic advocates at the present day. First mentioned in the works of Galen, this method was revived by Amussat in 1828, and thoroughly tried by him and other great surgeons of that day. After long experience, the celebrated Velpeau came to the conclusion that it was "not so universally applicable as the ligature, and in no case did it possess any advantage over it." It is possible that torsion may come into frequent use as a means of checking hem-

* An Inaugural Essay for the degree of M.D. in the University of Pennsylvania, to which the Alumni Prize was awarded at the Commencement held March 12, 1874.

orrhage from the smaller arteries after operations; but as applied to the larger arteries it is generally considered untrustworthy, while the fact that it causes sloughing of the portion of the vessel twisted removes much of its claims to superiority over the ligature. One great objection to torsion consists in the difficulty of performing it. Thus, Prof. Agnew states that he has seen Mr. Thomas Bryant, of London, spend ten minutes in twisting a single vessel;* while Billroth,† of Vienna, frankly states that he has entirely failed in attempts at torsion in cases of excision of the breast, and that, in his hands, secondary hemorrhage was on one occasion the consequence of unskilful torsion of the posterior tibial artery.

It is unnecessary in this connection to enter into a detailed description of the numerous instruments that have been brought forward with the intention of supplanting the ligature to a greater or less extent. Among them are Assalini's compressor, Nunneley's forceps, Richardson's tubular compressor, etc. The artery-constrictor of Dr. S. Fleet Speir seems to be the most ingenious and reliable of these contrivances; but even this has not obtained any great degree of favor among surgeons.

Although all of the above methods of preventing hemorrhage or obliterating arteries have advocates here and there in the ranks of the profession, yet it cannot be gainsaid that the ligature, from its great safety and the ease with which it can be applied, deserves its place as practically the best hemostatic that has yet been invented.

CHANGES WHICH ENSUE IN AN ARTERY AFTER LIGATION.

A. Ligation of an Artery in its Continuity.

I. When a thread is applied firmly to an artery—

(1.) The internal and middle coats are divided as if by a sharp knife. The external tough fibrous coat is puckered, and its surfaces internally made to touch each other; in this position it serves to keep the edges of the divided coats in contact. The vasa vasorum of the external coat are obliterated by the pressure of the ligature, and the constricted ring of tissue, therefore, deprived of nourishment.‡

(2.) Lymph is poured out from the edges of the divided coats above and below the ligature, and they become firmly adherent.§ On this is deposited, in the cardiac cul-de-sac, fibrin from the blood,

which rapidly grows until it forms a conical mass, reaching to the first branch given off; it does not at first adhere to the sides of the vessel, but merely by its base to the button of lymph. In the distal cul-de-sac of the vessel, as a rule, no coagulum is formed; nor is the deposit of lymph in this situation so great.|| Lymph is poured out from the external coat and the sheath of the vessel, forming a mass which envelops the noose and knot of the ligature.

(3.) The constricted portion of the external coat ulcerates, or sometimes separates in the form of a minute slough, and, together with the ligature, is gradually extended through a minute orifice in the capsule of lymph enclosing the ends of the vessel.¶ The place of the cast-off portion is filled in with lymph, so that dissection does not reveal any break in the continuity of the cord.**

(4.) The coagulum becomes adherent to the internal surface of the vessel, and undergoes organization, causing the arterial tube to be obstructed up to its first branch.

(5.) Absorption takes place, and after an interval of two or three months nothing remains of the vessel, from the point ligated to the first branch given off on the cardiac side, but a fibrous cord.

(6.) A small tortuous canal, uniting the ends of the artery, becomes developed in the centre of the fibrous cord.

This curious fact was first pointed out by Maunoir, of Geneva. He applied two ligatures to the carotid artery of a fox, and divided it between them: on

|| *Changes in the Distal Cul-de-sac of a Ligated Artery.*—"In the distal cul-de-sac of the artery, I have never seen any very distinct coagulum formed either in the human subject or in dogs on which I have experimented, but merely small detached fragments of coagula and some plastic effusion." (Erichsen's System of Surgery, vol. i. p. 254.) That secondary hemorrhage occurs most commonly from the distal extremity, does not show the importance of the clot, but of the adhesive inflammation of the internal coats, which is more apt to be imperfect in that situation. Were the absence of the clot the cause of hemorrhage, that accident would occur in nearly every case of ligation in the continuity of an artery; for, as we have seen, in nearly every case the clot is absent. Farther on will be noticed Porta's experiments on the "slack ligature," which also tend to prove the same assertion; since he found that hemorrhage with this kind of ligature was very common, no opportunity being allowed the internal coats to take on adhesive action; while with the ordinary tight ligature hemorrhage was unknown. The very shape of the clot shows that it is not designed for the prevention of hemorrhage. It is generally conical, and does not touch the sides of the vessel for a long interval,—not till the vessel is beginning to contract in calibre.

¶ *Division of the External Coat.*—"The ligature divides the internal and middle, but only compresses the outer coat. It makes a slough of a little piece of the latter, and when it comes away, at the end of ten days or a fortnight, you find the slough in it." Brodie's Lectures on Surgery, p. 306.

* A ligature takes from ten days (brachial artery) to twenty-one days (common iliac) to separate. Hence, as a general rule, sufficient time is afforded nature by the internal inflammatory changes, to glue the edges of the vessel together, and, by the external formation of a capsule, to form a splint to press them together, and thus occlude the artery and prevent hemorrhage.

** Mr. Jones's description of the changes in the ligated artery is so graphic that a portion is subjoined: "The formation of the coagulum is of little consequence; for, soon after the application of the ligature, the extremity of the artery begins to inflame, and the wounded internal surface of its canal, being kept in close contact by the ligature, adheres, and converts this portion of the artery into an impervious and, at first, slightly conical sac. It seems to be entirely owing to the effusion of lymph, by which this adhesion is effected, that the coagulum of blood formed within the artery is sometimes found adhering by a small portion of its base to the extremity of the artery. But whilst the adhesion of the internal parietes of the artery is accomplished, a considerable quantity of lymph is effused between its coats and among the parts surrounding its extremity, so that in a very short time the extremity of the artery is enveloped in lymph, and covered with a layer of it, just as we have seen the punctured artery to be. After a short time the ligature occasions ulceration of the part, around which it is immediately applied, and, acting as a tent, a small aperture is formed in the layer of lymph effused over the artery. Through this aperture a small quantity of pus is discharged, as long as the ligature remains, and finally the ligature itself also escapes, and the little cavity which it has occasioned granulates and fills up, and the external wound heals in the usual manner." Pp. 160-161.

* Lecture on Hemorrhage, Course 72-73, at University of Pennsylvania.

† Schmidt's Jahrbücher, No. 4, 1872.

‡ Bell compares the constricted external coat to a strangulated portion of intestine. Principles of Surgery, vol. i. p. 220.

§ *Adhesion of the Divided Coats.*—"The union between the edges of the divided coats is often found to be quite firm in experiments on the lower animals twenty-four hours after ligation (Jones on "The Processes employed by Nature in suppressing the Hemorrhage from Divided and Wounded Arteries." London, 1805, p. 140). That firm union sometimes takes place in as short a time in man, is proved by the results of the temporary ligature, which will be discussed in a succeeding page.

¶ That the adhesive inflammation of the divided coats is the most important portion of the process is demonstrated by the experiments of Jones. In many cases, after the ligature had separated, the artery was found entirely destitute of coagulum. Thus, in describing the appearances forty-nine days after ligation, he says, "The tunics of the artery were remarkably thick, but there was no coagulum within it." (*Op. cit.*, p. 155.) In many cases where the coagulum did exist, it was non-adherent, and, therefore, useless in preventing hemorrhage, as in Exp. IX., p. 148, where the animal was killed nineteen days after the application of a ligature, and, on examination, the artery was found to be obliterated by lymph, and containing "a black coagulum, which did not adhere to its internal surface."

examining the parts, a long time afterwards, he found "a very small vessel, a millimetre in diameter," joining the extremities of the artery.* Mr. Jones cast a great deal of ridicule on this observation, but it has been fully confirmed by Stilling and Porta, the latter giving a beautiful illustration of the "direct anastomosing vessels."†

The quantity of pus formed around the artery when the process of closure takes place in the most healthy condition of the tissues, is very small. Indeed, suppuration may be entirely absent, the strangulated portion being absorbed, as sometimes happened when it was the custom to cut the ligature short and leave it in the wound. On the other hand, pus, instead of lymph, may be poured out around the vessel at the point of ligation, and the ends of the artery lie bare in the cavity of an abscess. In such an event, secondary hemorrhage is sure to occur, if, coincidentally, the internal closing process is defective, or if the presence of the abscess around the vessel leads to such an interference with the nutrition of its walls as to cause ulceration.

If, however, the patient survives, the cavity of the abscess becomes studded with granulations, and gradually heals, as in ordinary cases.

II. When a thread is applied to an artery with sufficient firmness merely to stop pulsation, the internal and middle coats are not divided primarily. A clot forms at the point, and becomes adherent to the internal coat. The *vasa vasorum* at the constricted point being obliterated, the ligature slowly ulcerates through. Should the clot be imperfect, hemorrhage will occur, since the adhesion of the internal coats is much more apt to be deficient than when the ligature is applied tightly. If the thread is drawn tightly enough merely to diminish the calibre of the artery one-half or two-thirds, the artery may remain pervious, or a clot may form, and, becoming adherent to the walls of the vessel, undergo organization. The ligature then ulcerates through the walls of the vessel and the clot, and is cast off.

These methods of tying arteries are particularly objectionable, since almost the whole burden of occluding the vessel is thrown on the coagulum. Should the ligature ulcerate through the vessel before the clot has become firmly adherent, hemorrhage is the inevitable result.

The truth of this inference has been demonstrated on animals, and *a fortiori* must, therefore, apply to man; since, as is well known, secondary hemorrhage after experiment on animals, with the simplest precaution, very rarely or never occurs.

Porta performed seventy experiments to determine the value of the loose or slack ligature. In one-half of the cases the artery was closed by the formation of a clot, the exudation of lymph, or slow contraction from thickening of the external coat. In most of the remaining experiments the artery remained pervious, with little or no alteration in its coats. In a few instances the walls be-

came ulcerated or eroded, and fatal hemorrhage occurred.‡

B. *Changes which occur after the Ligation of an Artery at its Extremity.*

When a ligature is applied to the extremity of an arterial tube (as in cases of amputation), the same processes occur on the cardiac side of the ligature as when an artery is tied in its continuity. The external capsule of lymph does not envelop the ligature so completely. That portion of the vessel within and beyond the noose of the ligature perishes, and is extruded from the wound either in the form of a slough or a purulent discharge.

FIRST CLASS OF LIGATURES: THREADS.

Threads of various composition have been employed in tying arteries ever since ligatures were introduced. Flax, hemp, and cotton were formerly employed; but silk has taken their place in modern times, though the surgeon does not hesitate to resort to the former materials when the latter is not at hand. All of these substances exert the same influence on the animal tissues.

Thus, Porta made *sixty* experiments on the arteries of various lower animals with linen and hempen ligatures. In only *four* cases were abscesses produced. At the end of two years the ligatures had been absorbed in *ten* cases, while in most of the remaining, changes had occurred indicating the progress of absorption. The action of silk ligatures was very similar to that of other threads, as will be more fully explained shortly.§

A great variety of plans have been pursued in applying threads to arteries.

Paré used a strong double ligature, and did not scruple to include "some portion of the neighboring parts," as the vein and nerve.

Hunter in his first operation for aneurism, in 1785, tied the femoral artery with four separate ligatures drawn tight enough to bring the sides of the vessel in contact, and left the ends hanging from the wound, which he closed with adhesive plaster. After the occurrence of secondary hemorrhage, which was checked by the tourniquet, the wound healed, but abscesses continued to form, and pieces of ligature to be discharged, for six months afterwards. In his second case he tied both artery and vein with a single strong ligature, and dressed the wound from the bottom; the man died of secondary hemorrhage. After this he tied the artery alone with a single strong thread, and endeavored to heal the wound as rapidly as possible.

The subject of temporary ligatures is not devoid of interest. Some experiments by Mr. Jones led him to infer that an artery will become obliterated if its internal coats are divided in several places by the momentary application of ligatures. Mr. A. C. Hutchinson found the same result ensue when only a single division of the coats was made; but this was not confirmed by Hodgson and Dalrymple, who repeated his experiments. It occurred

* "Mémoires sur l'Anévrisme et la Ligature," Genève, 1802.

† "On the Pathological Alterations of Arteries by Ligature and Torsion," Milan, 1845.

‡ British and Foreign Medical Review, July, 1846, p. 97.
§ *Op. cit.*, p. 92.

to Mr. Travers that the cause of these failures was from the divided coats not being kept long enough in contact to insure adhesion. To test this theory he made eleven experiments on the carotids of horses and asses, leaving the ligature *in situ* from one to twenty-four hours, and in nearly every instance succeeded in obtaining obliteration of the artery by "albuminous or sanguinous coagulum." Long afterwards, Porta repeated Mr. Hutchinson's experiments, but with a different result: out of seventy-four cases in which the ligature was left *in situ* from one minute to twelve hours, he obtained obstruction of the vessel in only *fourteen* instances.

In 1817, Travers put his plan into practice in treating some cases of aneurism. In one case, the brachial was constricted for fifty hours with perfect success. In another instance, a ligature was left on the femoral twenty-seven hours, but pulsation recurred, and the ordinary operation was resorted to with success. In a third case, the attempt to use the temporary ligature resulted disastrously: Mr. Travers applied a ligature to the femoral for aneurism of the posterior tibial, and attempted to remove it on the third day, but found it impossible. Hemorrhage occurred, and on the fifth day another ligature was applied. Death ensued in a few days from a recurrence of the hemorrhage.*

Sir Astley Cooper, in a case of popliteal aneurism, applied a ligature to the femoral, and withdrew it in thirty-two hours; pulsation recurring, the thread was re-applied for forty hours. Hemorrhage now ensued to such an extent that it was necessary to employ the ordinary ligature. In a similar case in which Hutchinson applied two ligatures one-fourth inch apart, and withdrew them in six hours, pulsation returned; two more ligatures were applied; hemorrhage followed, amputation was performed, and the man died.

Considering the discouraging results obtained by the use of the temporary ligature, an attempt to revive it would scarcely be deemed wise. Yet such an attempt was made by Drs. Peters, Buck, and others, of New York, in 1868, but without success.

Scarpa† employed in cases of aneurism a species of temporary ligature which has been termed the *mediate ligature*. He used a cord composed of five or six threads, and placed a piece of linen between it and the vessel; the whole was removed in three or four days. This formidable procedure led to profuse suppuration, and other bad results, and it is not likely to be resuscitated.

Porta made eighty-five experiments with the *mediate ligature*. In twenty-four of these the artery was found pervious; in forty-five, closed either by plug (thirty-four cases) or lymph (eleven cases); and in sixteen, divided in two. Consequently it may be seen that with this method it is not even certain that the vessel will become obliterated.

The method pursued by Tenon, Abernethy, and others for the cure of aneurism, which consists in tying the artery in two places and dividing it between them, has nothing to recommend it. Accord-

ing to Porta, it is a dangerous method. In forty-five experiments to determine its value, hemorrhage from corrosion of the cardiac extremity occurred in three,—a result which was never seen after the common ligature.‡

The ligature of reserve, which consists of a loose thread placed above one applied in the ordinary manner, was much in vogue with English surgeons during the first quarter of the present century. This method necessitated the stripping of the vessel from its connections to a dangerous extent, and thus invited the very accident which it was designed to avoid,—secondary hemorrhage.

The plan of cutting both ends of the ligature short and burying it in the wound will be considered in the next section.

Veitch, of Edinburgh, in 1803, was the first to employ the modern method of applying the ligature, which consists in tying the vessel firmly with a single silk thread of moderate thickness, cutting one end close to the knot, and leaving the other hanging from the wound.

SILK LIGATURES.

Although silk, strictly speaking, is an animal substance, yet its action on the tissues is exactly similar to that of threads of other materials, and it has therefore been placed among thread ligatures, of which it may be taken as the type.

Experiments on Animals.

Where it is not otherwise stated in the following experiments, the ligatures were drawn firmly so as to divide the internal coats, the ends cut short, and the wounds closed by adhesive plaster or sutures.

Levert, of Alabama, in 1828, made some experiments with silk in order to compare its effects with those of metallic ligatures. They are not important; but, as the paper which contains the account has attracted much attention, they will be briefly given:

1. The humeral artery of a dog was surrounded with a single strand of waxed silk, drawn barely tight enough to bring the sides of the vessel in contact. On the fourteenth day a dissection of the parts was made, and the ligature found loose in the centre of a small abscess. The vessel had been ulcerated through, and its ends were separated a short distance.

2. The femoral of a dog was tied in the same manner. On the seventeenth day the ligature was found loose in a small abscess.§

Simpson briefly stated that he has repeated Levert's experiments and obtained identical results. He also states that in numerous instances in which he has inserted pieces of silk in the muscles of the lower animals suppuration has always ensued.||

Porta, in his elaborate work, gives the details of numerous experiments on the arteries of dogs, sheep, goats, calves, horses, asses, and rabbits. In nineteen out of one hundred and twenty experiments, the ligatures had disappeared by absorption at the end of two years. Most of those remaining had undergone changes indicating the progress of absorption. Some

* Med.-Chir. Trans., vol. vii.

† On Aneurisms, 1817.

‡ *Op. cit.*, p. 98.

§ Amer. Jour. Med. Sci., vol. iv., 1829, p. 17.

|| Simpson on Acupressure, Appendix.

became encysted *in situ* around the remains of the arteries; some were lying bare in the layers of cellular tissue; and a few had caused suppuration and been thrown off. Compared with catgut, silk produced more irritation and excited suppuration more frequently. Compared with linen and hempen threads, no difference was discovered in the results produced.

Lister, in 1869, made the following experiment:

The carotid of a horse was tied with a piece of purse silk which had been saturated in a strong watery solution of carbolic acid. The wound, which was dressed antiseptically, healed by first intention. On dissection, six weeks afterwards, the ligature was found encysted at the point of application; it had not cut through the vessel.*

There is nothing peculiar in the results of this experiment, as will be seen by a glance at those of Porta.

Howard tied the carotid of a sheep with silk, diminishing the calibre of the vessel one-half. He stitched the free end of the ligature to the integument. In twenty-three days he found the entire ligature hanging to the integument. The artery was obliterated, though no signs existed that it had been divided. It was surrounded by a mass of lymph; no pus was present.†

Experiments of the Writer.

Exp. I.—A coil composed of eighteen inches of saddler's silk was placed in the abdominal cavity of a cat, and the wound closed by silk sutures. The orifice healed by first intention. In twenty days the animal was killed, and the parts examined. The sutures were in place. The coil of silk was found in a capsule formed by the adhesion of the omentum to the abdominal walls. No pus existed.

Exp. II.—The flexor muscles of the thigh of a cat were surrounded subcutaneously with saddler's silk. No disturbance ensued. On examination, twenty days after, the silk was *in situ*, having caused no apparent change in the contiguous tissues.

Exp. III.—A piece of silk, one foot long, was placed beneath the integument of the shoulder of a cat, and the incision closed with silk sutures; it healed by adhesion. Six days afterwards the silk was found *in situ*, surrounded by a thin film of organized lymph.

Exp. IV.—The above experiment was repeated, with identical results.

Exp. V.—The abdominal aorta of a cat was tied with saddler's silk, and the inguinal wound closed by silk sutures. Union by adhesion occurred, but a large fluctuating tumor formed in the groin. In five days the animal was killed. The ligature was found *in situ*, and the parts around it healed. The pelvic cavity contained a large circumscribed abscess, the result of the dissection necessary in reaching the aorta.

Exp. VI.—The brachial of a goat was tied with sewing-silk. Silk sutures were used. Wound healed by adhesion. In fourteen days the ligature was found in place around artery, surrounded by organized lymph.

Exp. VII.—The carotid of a goat was tied with a single thread of saddler's silk, and three-fourths of an inch farther up with a threefold cord of the same material; sutures of silk were used; the wound healed by adhesion. In thirty-two days the animal, which had been sickly, died. Both ligatures were found encapsulated; the smaller surrounded the remains of the artery, the larger had nearly divided it. No pus was present. This experiment is an imitation of one by Lister with carbolized catgut, which will be detailed hereafter.

Exp. VIII.—The carotid of a cat was tied at one

point with silk, and at another, one-half inch above, with catgut (non-carbolized). The wound was drawn together by fine silk sutures; it healed by first intention. In sixteen days the parts were examined; the silk was encapsulated, and had nearly divided the vessel; the catgut was also encapsulated; it was very much softened, and partly absorbed. The artery presented no appearance to indicate that it was undergoing division at this point.

Exp. IX.—The carotid of a large dog was tied at one point with lead wire (drawn firmly), and one inch above, with silk. The wound was drawn together with silken suture; but it was slow in healing, on account of the constant efforts which the animal made to irritate it. On examination, in forty-two days, the artery was found obliterated between the points of ligation. No traces of either ligature could be found.

RESULTS OF THE USE OF SILK LIGATURES ON MAN.

1. *The Short Silk Ligatures.*—A remarkable series of observations on this subject was commenced about 1786, and terminated (by Mr. Lister) in 1869. I refer to the method of tying arteries firmly with silk thread, cutting the ends short, and endeavoring to heal the wound by first intention.

The results of the first cases in which this was tried are given in a letter written by Mr. Haire, of England, in 1786:

"By following this plan we have seen stumps healed in the course of ten days. The short ligature thus left in commonly made its way out by a small opening in a short time, without any trouble or the patient being sensible of pain."‡

Hennen, in 1813, tried the short ligature in many cases of amputation. Some of the ligatures came away with the dressings, some made their appearance in small pustules which formed on the surface of the stump, and a few never came to the surface.§

In 1814 Lawrence published his experience. He used a very fine variety of silk, and found that the ligatures came away with the discharges; or when the wound healed by first intention they came away with trifling suppuration, or occasionally remained. He applied the short ligature to the treatment of aneurisms, but after prolonged experience came to the conclusion that it generally caused suppuration, and abandoned it altogether.

Guthrie, and other eminent surgeons, after similar experience, came to the same conclusion.

Occasionally, after a ligature was left in the tissues the wound healed, and it was extruded in a very curious manner, without suppuration, as in the following case:

The brachial artery was tied for aneurism. The wound healed in thirty-nine days. On the sixty-second day a small tubercle which had been felt in the centre of the cicatrix for some time made its appearance above the skin. It was found to contain the ligature. No suppuration or discharge of any kind occurred.||

Sometimes the ligature remained permanently encysted, as in the following case:

* Lancet, April 3, 1869, p. 451.

† Trans. Amer. Med. Assoc., 1872.

‡ London Med. Jour., vol. vii.

§ Military Surgery, p. 75.

|| Cooper's Surg. Dict., art. "Ligature."

The external iliac was tied for popliteal aneurism. The man died in five months, and on dissection the ligature was found lying close to the artery in a small cyst, something like an inguinal gland.*

Lizars gives an instance where the subclavian was tied for axillary aneurism, with flax thread cut short. The wound healed completely by the third day, and nothing was ever seen of the ligature.†

Carwardine tied the femoral for popliteal aneurism with a short ligature of fine silk. The wound united by first intention, without the formation of a drop of pus, and nothing was ever seen of the ligature.‡

Porta considers that in rare cases a silk ligature is absorbed, as not infrequently happens in animals.

Lister, in 1869, published the following case. The left external iliac was tied for aneurism of the femoral, in a lady aged 51. Silk thread which had been soaked in carbolic acid was used, and the ends of the ligature cut short. Under antiseptic treatment, the wound healed completely in four days. The patient died in ten months of aneurism of the aorta. On dissection, a small capsule was found attached to the fibrous remains of the ligated artery. It contained the knot of the ligature, some disintegrated fibres of its noose (showing that partial absorption had occurred), together with a minute quantity of semi-fluid pus.§

To conclude: When a silk ligature is buried in the tissues, and the wound heals over it, it is either Extruded with suppuration;
Extruded without suppuration; or, in some cases, Encysted.

2. *Silk Ligatures in the Abdominal Cavity.*—It might be supposed that silk would not be tolerated in contact with so sensitive a membrane as the peritoneum, but that its presence would inevitably lead to suppuration. Experience, however, has proved the contrary to be the case.

Peaslee, who has obtained at least average good results in ovariectomy, has long been in the habit of ligating the pedicle and all bleeding vessels with silk ligatures, and closing the incision over them. Except in very rare cases, in which he has seen abscesses form and the ligatures come away, he has found this method perfectly safe. In one case he applied fifteen ligatures to bleeding vessels, and no disturbance ensued.||

Keith, of Edinburgh, has also used silk ligatures in similar cases. In one instance he applied thirty short silk ligatures, and the patient made a good recovery, the ligatures never making their appearance.¶

In one case in which the pedicle of an ovarian tumor was tied with silk, death took place on the seventeenth day from exhaustion. On examination, evidence of very slight peritonitis existed. "The pedicle of the tumor was atrophied, but no slough had occurred. The ligature around the largest portion of the stump had nearly slipped off. The other was still *in situ*, and covered by an exudation already somewhat organized."***

From this autopsy we may infer that the ligatures in these cases became encysted.

3. *Results when the Silk Ligature is applied after the Modern Method.*—When an artery is tied in its continuity, the wound frequently heals by first intention, leaving a small orifice for the transmission of the thread, through which a few drops of pus are discharged.†† After a variable period the ligature comes away, and, the artery having become consolidated by the processes already described, all risk of hemorrhage is obviated.

Although statistics cannot be cited on this point, yet it may be received as the result of practical experience, that the presence of the thread does not interfere materially with the healing of the wound, and, consequently, that the use of silk ligatures is not productive of pyæmia.

As secondary hemorrhage has been asserted to occur more frequently after the use of silk than after the use of animal ligatures, it behooves us to inquire into the frequency of this accident, in order that in the proper place the truth of such assertion may be examined into.

The following statistics, although they are the best that can be obtained, afford scarcely a fair view of the subject, for in many of the cases the method of Scarpa and other dangerous procedures were employed, and indeed it is believed that in comparatively few instances has the modern rule of disturbing the connections of the vessel as slightly as possible been followed. Moreover, scattered here and there among the cases are instances in which other besides silk ligatures have been used.

Table of Ligation of Arteries in their Continuity.

Total number of cases.	Vessels tied.	Number of cases of secondary hemorrhage.	Number of cases dying of secondary hemorrhage.	No. dying from all causes.
a 600	All the arteries.	75, or 12½ per cent.	30, or 5 per cent.	168
b 69	Subclavian.	14, or 20 per cent.	9, or 13 per cent.	33
c 167	Carotid.	21, or 12½ per cent.	14, or 8½ per cent.	56
d 118	External iliac.	14, or 12 per cent.	6, or 5 per cent.	33
e 204	Femoral.	22, or 11 per cent.	6, or 3 per cent.	50
f 31	Primitive iliac.	5, or 16 per cent.	5, or 16 per cent.	24

a Porta, *op. cit.*

b Norris, *Am. Jour. Med. Sci.*, July, 1845.

c Norris, *ibid.*

d Norris, *ibid.*, Jan. 1847.

e Norris, *ibid.*, Oct. 1849.

f S. Smith, *ibid.*, July, 1860. Crampton's case, in which catgut was used, has been omitted, as it will be included in another table.

Death is said to have occurred from pyæmia in seven of the above cases: six of Porta's cases (tabes purulenta), and one of Norris's cases of ligation of the carotid (purulent absorption).

In amputations, secondary hemorrhage is of very rare occurrence. Out of three hundred cases (in most of which the silk ligature was used) death was caused by this accident in only five cases (1.66 per cent).‡‡

Holmes, as the result of an examination of another

†† "The parts indeed frequently, if not generally, unite by first intention, and if there is any suppuration it is generally at the seat of the ligature." *Syst. of Surg.*, S. D. Gross, vol. i. p. 726.

‡‡ Bryant, *Med.-Chir. Trans.*, vol. xlii. pp. 85-90.

* Porta, *op. cit.*, p. 32.

† *Lancet*, Aug. 31, 1872, p. 288.

‡ *Cooper's Surg. Dict.*, art. Aneurism.

§ *Lancet*, April 3, 1869, p. 452.

|| Peaslee on Ovarian Tumors, p. 430.

¶ *Edin. Med. Jour.*, Dec. 1867, p. 525.

*** "Two Cases of Ovariectomy." Peaslee, *Amer. Jour. Med. Sciences*, 1865, p. 77.

series of three hundred cases, says, "Secondary hemorrhage is hardly ever a cause of death, except in persons with diseased arteries."*

Pyæmia, on the other hand, is a very common cause of death. Thus, of Bryant's three hundred cases, thirty, or ten per cent., perished of this disease. But there is no reason to suppose that the material of the ligature had anything to do with this mortality.

(To be continued.)

THREE RARE SURGICAL CASES.

BY CHARLES B. NANCREDE, M.D.,

Assistant-Surgeon to the Protestant Episcopal Hospital.

CASE I. *A Rupture of the Biceps Flexor Cubiti.*—

An elderly man, about 60 years of age, came to me at the Protestant Episcopal Hospital during the summer of 1871, complaining of an injury to his arm and shoulder, caused by a fall from his cart. On examining him, I found a singular condition of the biceps of one arm, as if part of its belly were gone, which the man himself had noticed, saying that after the fall his "muscle had gone up his arm." As the accident had occurred some days before, there seemed nothing to be done, especially as he suffered no inconvenience beyond weakness. I concluded at the time that, from making a violent muscular effort to save himself, one head, probably the long one, had been ruptured.

In placing this case on record, I must apologize for the imperfection of the notes; but, as Dr. S. Ashhurst has shown, in the *Philadelphia Medical Times* for January 11, 1873, how rare such accidents are, I thought it worth reporting, even from memory. Dr. Ashhurst, in the above-mentioned paper, states that only one other case besides his own has been put on record, viz., one by Mr. South,† which he also relates from memory.

Case II. *Fracture of a Rib by Muscular Violence.*—

Thomas —, an Englishman, aged 44 years, a gardener by occupation, came to me at the Protestant Episcopal Hospital during the summer of 1873, saying that he had "strained himself" about ten days before, while trying to straighten a scythe-blade, which he held down with one hand, while, seizing the end with a monkey-wrench, he pulled upwards with the other. At first this had not given him much trouble, but the pain had increased until it demanded attention. He was a singularly healthy, vigorous man, never having had any other fracture, and of perfectly regular habits. Much to my surprise, on examining him, I readily detected bony crepitus, etc., at about two and a half inches from the sternum, on the second rib. The crepitus was so marked that without any difficulty two or three other gentlemen, who were present, confirmed the diagnosis. He was treated by adhesive straps, etc., and did well.

This case has proved unique so far as I have been able to ascertain by reading or inquiry. Malgaigne has collected eight cases due to muscular violence, but thinks that in all of them there was atrophic thinning. They were reported by Gooch, Monteggia, Graves, C. Broussais, Nankivel, and one occurred at the Hôpital Necker. Four occurred in men, and four in women. The age is given in six: five were in persons between forty-seven and sixty-

three years of age, the sixth being a young man. He says that in seven cases the cause was a severe effort at coughing. In M. Broussais' case the patient had chronic pneumonia and eccentric hypertrophy of the heart, to which latter M. Malgaigne is inclined to attribute some influence, as the fracture occupied the fourth true rib at the junction of its anterior fourth with the rest of the bone. In all these cases the seat of lesion was in the anterior half, near the cartilages. He also says, "What is not less remarkable is that so far no instance has been known of such a fracture occurring on the right side. In the cases hitherto known, the ribs involved have been the fourth, fifth, and sixth, then the ninth, tenth, and eleventh, the seventh and eighth being exempt. Generally but one rib is affected; once only the fracture occurred simultaneously in the fifth and sixth; and in the curious case at the Hôpital Necker there took place in less than one month three successive fractures, affecting first the tenth, then the ninth, and lastly the eleventh rib. On the whole, the tenth seems to be the rib most exposed."‡ Now, in my case, the fracture was that of the *second* rib of the *right* side.

Malgaigne thinks these cases were due to muscular action, which in coughing produces the fracture by approximating the sternum and spinal column, just as external pressure does. Whether this is the explanation of the mechanism in my case I am not prepared to say, although the effort, as the patient described it, *would* tend slightly to approximate the anterior and posterior walls of the chest on one side—the side of tension,—and *expand* it on the other side,—that of prehension.

It might be urged that this was a fracture of an ossified cartilage; but I think not, although it was very near the junction; besides, the patient's age is against this, he being only forty-four years old, with no signs of premature decay—indeed, the reverse. The crepitus was such as could only have been produced by a cartilage as calcareous as bone itself.

Case III. *A Luxation of the Lower End of the Ulna forwards.*—

Eliza Wade, aged 17 years, a mill-girl, came to the Protestant Episcopal Hospital in March, 1874, having had her right wrist injured by her hand being caught between the spokes of the fly-wheel of a spooling-machine, which made a complete revolution before she could stop it. On examination, I found the hand bent back, pronated, and directed towards the radial side, the fingers semi-flexed, and the styloid process of the ulna projecting at the front of the wrist. After etherization, I readily reduced the luxation by seizing the fore-arm with one hand, while with the other I made extension, at the same time pressing the carpal bones downwards. There was no tendency to displacement. All the carpal bones seemed loosened, as it were, and the cartilage must have been torn off at the inferior radio-ulnar articulation, as there was crepitus there. Nothing, however, like a fracture in the sense of an appreciable fragment of bone could be detected.

This was readily determined, as I examined the case within half an hour after it occurred, and before swelling had supervened.

Malgaigne has collected nine cases of this luxa-

* Holmes, St. George's Hospital Reports, vol. i. pp. 321-322.

† Chelm's System of Surgery, vol. i. p. 543.

‡ Malgaigne's Treatise on Fractures, p. 348.

tion, and Hamilton one, reported by Parker, of Liverpool. These, so far as I am aware, are all that have been put on record up to the present time.

In most cases the reduction is readily effected "by pushing the ulna towards its socket, while an attempt is made to flex the hand, or by extension, supination, etc.," according to Hamilton; but Parker could only effect this while the hand was pronated. I give his own words: "Several ineffectual and very painful attempts were made to accomplish the reduction, by pushing the head of the ulna into its natural position. This was at last effected by seizing the hand to make extension (counter-extension being made at the elbow), then forcibly pronating the hand, at the same time pressing backwards the dislocated head of the bone with the fingers of the left hand. After persisting for a short time, the bone was felt to assume its natural position."* My case was also reduced while the hand was pronated.

NOTES OF HOSPITAL PRACTICE.

JEFFERSON MEDICAL COLLEGE.

SURGICAL CLINIC OF PROF. S. D. GROSS, M.D.

Reported by T. H. FENTON.

PROTRUSION OF SCAPULA.

IDA D., aged 13 years. You notice in this case, gentlemen, two distinct prominences on the back in the region of the scapula. The affection is nothing very remarkable, being simply a projection of the inferior angle of the scapula farther backwards than is customary. The difficulty is owing simply to a relaxed condition of the parts, especially the latissimus dorsi and great serrated muscles. The latissimus dorsi, as you all well know, arises from the spinous processes of the sacrum, the lumbar vertebrae, and the seven lower dorsal vertebrae, and also from a portion of the spine of the ilium. The fibres of the muscle pass upwards and outwards, over the inferior angle of the scapula, to the axilla, where they become twisted, and are finally inserted into the inner edge of the bicipital groove. The deformity is very unseemly. It happens mostly in girls, especially factory-hands who are the day long working in rooms filled with confined and vitiated air; it is also seen in children of a strumous disposition, and in school-girls. The accident is very rare in boys. Sometimes, owing to great violence, the scapula may be detached from its muscular connections, but this is very rare indeed. A remarkable case came under my notice, happening to a boy who was detected kindling a fire in the cellar of a stable. The owner of the property in his anger took the boy and threw him up on the sidewalk. A consultation was called, and the physicians, both of whom were young, stated that a dislocation of the scapulæ from their muscular attachments had taken place as a result of the violence. Suit for damages was brought against the man. I was called in as an expert, and, after examining the child, I testified that the difficulty was not owing to the violence, but due to the relaxation of the parts. Notwithstanding all my experience and years, a verdict of eight hundred dollars was rendered against the defendant, which was unjust in every sense. In the case of the child before us, I shall order a brace to be worn with the

pressure applied directly over the inferior angle of each scapula. She will be put upon the use of iron and quinine, and have the cold shower-bath applied daily. We will also slap the parts twice in the twenty-four hours with the ends of a fringed towel dipped in cold water; this promotes the nervous action. You may, if you please, also use the veratria ointment; the patient must always sit on a chair or bench with a back, and not be allowed to bend forwards.

TRANSLATIONS.

CÆSARIAN SECTION.—Dr. Fritz Schurig gives an account of this operation, as performed by him on a patient 37 years of age, in whose case safe delivery was impossible by reason of a condition of osteomalacia. The procedure was as follows. An incision, six inches in length, was made in the line of the linea alba, when the uterus presented itself in a condition of complete anteversion, with the ovarian ligament and the broad ligament protruding through the wound. Afterwards the uterus was turned, and, being pressed against the abdominal walls by an assistant, was also opened by an incision. The placenta proved to be attached anteriorly, and after its removal the living child was seen lying with its buttocks forward, and with the head somewhat turned to the left, owing to its unfavorable position for several days previously. The uterine wound bled freely. The abdominal wound was closed by ten sutures, aided by strips of adhesive plaster. Shortly after the operation the patient succumbed, owing to loss of blood.

The post-mortem examination showed the bones highly hyperæmic, the form of the pelvis indicative of osteomalacia, and the last lumbar vertebra strongly pressed downwards, as after spondylitis. The various bones of the pelvis were movable at their junctures. Four months previous to delivery, the patient experienced a sensation as if something in the pelvis had become *sprung*, or as if the pubic bones had become partly separated. This latter fact is of interest in connection with the proposal to divide the symphysis pubis in narrow pelves.—*Jahrsb. d. Gesells. f. Nat. u. Heilkunde.* A. V. H.

TRANSFUSION IN THE TREATMENT OF CHOLERA (*Inaug. Dissert.*, Berlin, 1873).—G. Kalisher reports two cases of cholera, treated by transfusion of blood, in Berlin, during the last epidemic of this disease. In both cases the blood was injected into the basilic vein; the operation in one case being followed by recovery, and in the other by death. He reports also another case, treated in the same manner, in which the operation was followed by recovery. Among fourteen cases which he found reported in the journals, there was but one recovery. After the operation, however, there was usually noticed some amelioration of the condition of the patient, the pulse became stronger, and the occurrence of death seemed to have been retarded. A. Netter (*Gazette des Hôpitaux*) states that Lorain, after injections of water into the veins, always noticed an improvement in the general condition of the patients, and in one case in which life had been despaired of, recovery took place. The amount of water injected in this case was but 400 grammes, but the patient drank large quantities of the same fluid while under treatment. Netter agrees with Goltz in thinking that the injection of water into the veins is as satisfactory as that of blood or saline solutions, and concludes that the only use of transfusion is the introduction of fluid, by which the circulation is again rendered possible. W. A.

* London and Edinburgh Monthly Journal of Medical Science, December, 1842.

PHILADELPHIA

MEDICAL TIMES.

A WEEKLY JOURNAL OF

MEDICAL AND SURGICAL SCIENCE.

The Philadelphia Medical Times is an independent journal, devoted to no ends or interests whatever but those common to all who cultivate the science of medicine. Its columns are open to all those who wish to express their views on any subject coming within its legitimate sphere.

We invite contributions, reports of cases, notes and queries, medical news, and whatever may tend to increase the value of our pages.

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EDITORIAL.

INCREMENT OF POPULATION.

ACCORDING to a recent English journal, the following table represents accurately the increase in the commerce and population of the Christian world during the last seventeen years. It is of great interest on account of its bearing upon the questions whether the population multiplies too fast for the good of the race, and whether the general comfort of the individual is being increased or decreased :

	FOREIGN COMMERCE.		POPULATION.	
	1855.	1872.	1855.	1872.
Great Britain.....	£268,400,000	£609,600,000	27,620,000	32,000,000
France.....	150,300,000	285,800,000	35,750,000	36,100,000
United States.....	107,340,000	232,800,000	27,000,000	41,000,000
Belgium.....	69,000,000	199,800,000	4,530,000	5,100,000
Germany, imp'ts only	53,200,000	100,000,000	33,500,000	39,400,000
Austria.....	26,000,000	89,400,000	36,500,000	35,900,000
Russia in Europe.....	45,400,000	103,000,000	65,000,000	71,000,000
Italy.....	32,200,000	103,600,000	18,850,000	27,000,000
Spain.....	32,500,000	27,800,000	15,600,000	16,370,000
Netherlands.....	54,000,000	88,000,000	3,433,000	3,650,000
Sweden.....	9,000,000	14,600,000	3,660,000	4,100,000
Total.....	£848,340,000	£1,855,200,000	271,443,000	311,620,000
Increase in 17 years (commerce).....			118.5 per cent.	
Increase in 17 years (population).....			14.8 per cent.	
Foreign commerce in 1855 per head of population.....			£3.13	
Foreign commerce in 1872 per head of population.....			£5.95	
Increase per cent.....			90	

The most striking deduction to be made from this table is not the great increase of commerce, but the fact that in seventeen years the amount for each individual has nearly doubled. There has been a slow growth in the number of the people, but a very rapid growth in the commerce. Commerce is an index of wealth, and increase of wealth means, in the highest degree, augmentation of physical comforts and well-being. Evidently there is no present danger of the race becoming extinct by an increase

of the population beyond the power of production, but there is a steady augmentation of the material things of life, so that every man has more to offer to his neighbor in exchange,—the surplus of the necessities of life in the one clime being the luxuries of another.

PROCEEDINGS OF SOCIETIES.

PENNSYLVANIA STATE MEDICAL SOCIETY.

THE Medical Society of the State of Pennsylvania met at Easton, Wednesday, May 13, at 3 P.M., to hold its twenty-fifth annual session, in the chapel of the Reformed Church.

The meeting was called to order by the President, Dr. S. B. Kieffer, of Carlisle, when the Society was led in prayer by Rev. W. C. Cattell, D.D., President of Lafayette College.

The Chairman of the Committee of Arrangements, Dr. Traill Green, welcomed the delegates to Easton, in a very appropriate speech.

Dr. Green then reported the programme for the meeting, which was adopted, after which the roll was called by the Secretary, the members present numbering in all 129.

Dr. Stetler, of Philadelphia, then made a motion that the regular order of business be suspended to enable the President to deliver his Annual Address at Pardee Hall that evening. He also moved that the regular order be suspended to consider the following amendment to the Constitution, proposed during the session last year by Dr. Atlee of Lancaster; which was adopted.

The section reads thus :
"Any member of a County Society who is censured, suspended, or expelled shall have a right to appeal to the censors of the district, provided the said appeal shall be filed within three months after the date of said act of censure, suspension, or expulsion. The decision of the censors shall be final. Three censors shall constitute a quorum."

The amendment is to strike out the word "final" in the above section, inserting "reported to the State Medical Society at its next meeting for final action."

The matter was discussed by Drs. J. L. Atlee, H. Corson, and others, and adopted by a vote of two-thirds.

On motion of Dr. Green, Dr. P. D. Keyser, of Philadelphia, then read an abstract from his paper on Operation for Cataract, as follows :

Report on One Hundred and Thirty-two Cataract Extractions.

During the past six years, 1868 to 1873 inclusive, I have made 132 extractions of cataract, of which number 60 were made in the Philadelphia Eye and Ear Infirmary, 23 in the Wills Ophthalmic Hospital, and 49 in private practice.

Of the operations performed, 120 were made according to Von Graefe's modified linear method, 3 were made according to Daniel's corneal flap method, 3 were made according to Pagenstecher's method, 3 were made according to Liebreich's method, and 3 were made according to Bowman's suction method.

The ages of the patients ranged from 17 to 82 years.

The acuity of the vision obtained was, in 1 case, $\frac{15}{XX} = \frac{3}{4}$; in 9 cases, $\frac{20}{XXX} = \frac{3}{8}$; in 11 cases, $\frac{20}{XL} = \frac{1}{2}$; in 18 cases, $\frac{20}{L} = \frac{2}{5}$; in 15 cases, $\frac{20}{LXX} = \frac{7}{10}$; in 41 cases, $\frac{20}{C} = \frac{1}{5}$; in 1 case, $\frac{15}{C} = \frac{5}{20}$; in 1 case, $\frac{10}{LXX} = \frac{1}{4}$; in 17 cases,

$\frac{20}{CC} = \frac{1}{10}$; in 3 cases, $\frac{15}{CC} = \frac{3}{40}$; in 1 case, $\frac{5}{LXX} = \frac{1}{14}$; in 5 cases, $\frac{10}{CC} = \frac{1}{20}$, and in 5 cases, closure of the pupil, which can be operated on, and 4 cases total loss.

Classified according to success of operation with vision, we have—Vision to $\frac{1}{10}$ as perfect, 114 cases, = 86 $\frac{4}{11}$ per cent.; $\frac{1}{10}$ to $\frac{1}{20}$ as moderate, 9 cases, = 6 $\frac{1}{11}$ per cent.

Good success, total 93 $\frac{2}{11}$ per cent.

Imperfect, some of which may be improved by operation, 5, = 3 $\frac{3}{11}$ per cent.

Complete loss, 4, = 3 $\frac{1}{11}$ per cent.

In four of the cases iridectomy was made 6 to 12 weeks previous to the extraction of the lens.

Hemorrhage into the anterior chamber occurred in 25 cases. In 19 cases the lens was removed by a traction instrument. Escape of vitreous occurred 9 times.

Iritis, with closure of the pupil, took place in 9 cases; in two of which iridectomy was made afterwards with perfect success, and iridotomy also twice, with good results.

The instrument used for the iridotomy operation was a modification of De Necker's scissors, made by Messrs. Gemrig & Son, of Philadelphia. In both cases a large triangular piece of the iris was easily and readily removed, by which means a good-sized pupil was obtained.

Secondary cataract formed in four cases, which were afterwards operated on with good success.

Severe intraocular hemorrhage took place in one case after the extraction of the lens.

Sloughing of the cornea occurred once only.

Irido-choroiditis, with phthisis bulbi, one case.

In one case death took place from acute abscess in the brain forty-eight hours after a secondary operation for the removal of a band of lymph across the pupil.

Astigmatism was found in fifty-eight cases after the operation, necessitating the use of cylindrical glasses. The great majority of these came, no doubt, from the operation causing a change in the curvature of the cornea.

In the operations by Von Graefe's method the incisions were made in the sclerotic, beginning at the sclero-corneal junction, and the most of them brought out in the same with a large conjunctival flap, while in others the incision was brought out in the cornea close to its edge. Those brought out in the cornea did not heal so quickly, although quite as well, when there was a conjunctival flap.

In many of the cases, the upper part of the anterior capsule was removed after its rupture, as recommended by Knapp.

In a few cases, where secondary cataract was feared, the posterior capsule was ruptured and torn aside, very little, if any, vitreous was lost, and all healed well with perfect to $\frac{1}{10}$ vision.

Care was taken before closing the eye to remove the edges of the incised iris from the corners of the sclerotic wound into the anterior chamber. In some cases, where the pupil was drawn too much upward by the edges of the iris having healed in the sclero-corneal wound, it was relieved by simply cutting the iris loose from its attachments in the cicatrix, by making an incision in the cornea on the line of the former wound with a lance-shaped iridectomy knife, and introducing the small iridectomy scissors, allowing one branch to pass under and the other over the iris, and snipping it through as close to the cornea as possible.

Atropia being put in the eye before and after the operation, caused the iris to dilate, and, being free, resumed its normal position. This was found a more satisfactory operation than iridectomy; there is less hemorrhage into the anterior chamber, and it gives a better-shaped pupil.

NOTE.—After the report was written and laid before

the Philadelphia County Medical Society for the State Medical Association, case No. 119 was on May 6 re-examined, and it was found that her vision had improved from $\frac{5}{LXX}$ to $\frac{12}{C} = \frac{1\frac{1}{2}}{8}$, and with $+1\frac{1}{8}$ could read Jäg. 5 readily.

By this the percentage of perfect success is increased to 87 $\frac{4}{11}$, instead of, as above, 86 $\frac{4}{11}$.

The paper was referred to the Committee on Publication.

Dr. S. Caro, a representative from the New York State Medical Society, being formally received, then addressed the Society.

After due motion, the order of business for Thursday was arranged, the first addresses being those on Surgery, Obstetrics, and Medicine.

A Committee on Unfinished Business, composed of Drs. Stetler, of Philadelphia, H. Corson, of Conshohocken, and E. A. Wood, of Pittsburgh, was appointed by the President.

On motion, the report of the Committee from last year on the Revision of the Censorial Districts was taken up and read, and adopted after due discussion.

According to this action, the State is divided into thirteen Districts, each of which has a Censorial Board of three members, to which one member from each County Medical Society is eligible.

Other less important amendments, offered at the last meeting of the Society, were read, and adopted without opposition.

On motion of Dr. Green, the Society adjourned to give the County Societies opportunity to select their representatives for the Committee on Nominations.

Wednesday Evening.—The Society assembled in the auditorium of Pardee Hall at 8 o'clock. The Hall was filled with ladies and gentlemen from the College and town. Some of the members of the Society have their wives with them, and they were present also. On the stage sat the former Presidents of the Society, the Vice-Presidents, and Dr. Traill Green, who introduced Dr. S. B. Kieffer, of Carlisle, the President of the Society, who delivered the annual address, which was received with much applause and by motion was referred to the Committee on Publication.

Before adjournment the Committee on Nominations was announced by the Secretary, viz.: Beaver, Dr. Jackson; Berks, Dr. Weidman; Allegheny, Dr. Wood; Blair, Dr. Clark; Bradford, Dr. Conklin; Columbia and Montour, Dr. Pursell; Cumberland, Dr. Mosser; Dauphin, Dr. Orth; Delaware, Dr. Roland; Franklin, Dr. Snively; Huntingdon, Dr. Shade; Indiana, Dr. Rutledge; Lancaster, Dr. Davis; Luzerne, Dr. Murphy; Lycoming, Dr. Crawford; Mercer, Dr. Fulton; Mifflin, Dr. Hersberger; Montgomery, Dr. Corson; Northampton, Dr. Bachman; Perry, Dr. Swartz; Venango, Dr. Richey; Clearfield, Dr. Burchfield; Philadelphia, Dr. Eshelman; Schuylkill, Dr. Halberstadt; Susquehanna, Dr. Ainey; Tioga, Dr. Maine; York, Dr. Bailey.

SECOND DAY.

Thursday Morning.—The early part of the morning was occupied by the members of the Society in inspecting the College buildings, museums, laboratories, and halls, and in the preliminary meetings of committees.

The Society was called to order at half-past nine o'clock, in Pardee Hall, the minutes of the previous meeting being read and approved.

An address, prepared by Dr. Thomas M. Drysdale, of Philadelphia, now travelling in Europe, was first read,—subject, "Surgery,"—Dr. Washington L. Atlee, of Philadelphia, reading the report by request.

Dr. Drysdale chose Tracheotomy, regarding it as equally important to the surgeon and the practitioner, "since it brings back to life one who is suffocating and

is at the point of death." Every practitioner should be ready to perform it. It is required for inflammation of the larynx and trachea, and its results; spasm of the larynx; abnormal growths in the larynx; paralysis of the larynx; pressure from tumors, aneurisms, or abscesses; foreign bodies in the windpipe. He then mentioned, under each head, the diseases or accidents likely to require this operation. He then detailed, somewhat minutely, the anatomy of the parts involved in the operation. The instruments required were a sharp scalpel with a good point, a blunt-pointed bistoury, a director, a tenaculum, a pair of sharp-pointed straight scissors, dissecting-, torsion-, and dressing-forceps, two blunt hooks or curved spatula, a dilator, a canula adapted to the age of the patient, with tape to secure it, a small sponge probang, a gum-elastic bougie of a size which will pass through the canula, a syringe and tube to pass into the trachea to use if the operator fears to apply his mouth to the wound to suck out the blood from this organ; plasters, sponges, water, and towels also at hand.

The dilator should be curved at a right angle: it has three branches of equal length, which are grooved on the inside; and it opens by pressure.

The canula should be the ordinary double canula, with the improved neck-plate of Mr. Rogers, made so that while the neck-plate is fixed the tube is allowed to follow partially the motions of the trachea. An important point is that the canula should be double, that the inner tube may be withdrawn and cleansed without disturbing the outer. The surgeon should have canulae of various sizes, and use the largest.

Anæsthetics should be employed except where the patient is asphyxiated and nearly or quite insensible, or in cases of sudden suffocation.

This operation includes laryngotomy, laryngo-tracheotomy, and tracheotomy. He then described in detail each of these operations. He next considered the difficulties attending the operation. *Hæmorrhage*: Use the knife as little as possible after the first incision, substituting the handle, the director, and the fingers.

Ligate, if practicable; but if time will not suffice, open the trachea at once, introduce the tube, and if any blood has entered apply the mouth and suck it out. Of course this cannot be done where there is contagious disease: here the syringe should be employed; but if it becomes imperative, the operator should not neglect the precaution of Dr. Gross, of "washing out the mouth and throat well, immediately after, with a strong solution of chlorinated soda or some other disinfecting fluid, for the purpose of promptly neutralizing the poison contained in the secretions of the parts."

Hæmorrhage is rarely fatal if the surgeon does not lose his presence of mind. Always complete the operation, however forbidding the aspect of the case. The surgeon may lose the opening, owing to the fact of making it too small, or a convulsive effort may ensue; do not spend much time, but make another. The after-treatment requires care.

The air should be kept moist. Keep lime constantly slaking near the patient, both for its steam and its dissolvent effect. Attend to the tube: withdraw and cleanse it every two hours at first, or oftener if necessary. Pass a bougie, to cleanse if necessary, down into the trachea. This causes cough, and matters are thus expelled. A skilful attendant should be the one to look to these matters:

In croup and diphtheria, chlorate of potassium should be freely exhibited. Dr. D. uses a saturated solution, thirty grains to the ounce, a teaspoonful to a table-spoonful, according to age, every half-hour to every three hours. If the bowels are irritated, add a small quantity of opium, and, as the patient progresses, add tincture of iron.

Relief having been secured, the canula may be removed as soon as it can be done without risk. To determine this, stop the end of the tube with the finger, and see if the patient can breathe through the larynx. If so, cork the tube for twenty-four hours. If all goes well, remove the canula and let the wound heal, keeping it clean and covered with a light dressing. It may, in chronic disease, be necessary to wear the tube for life.

Referred to the Committee on Publication.

The next thing in order was the reading of the Address on Obstetrics, prepared by Dr. William B. Atkinson, of Philadelphia, given in abstract, which gave in detail an accurate account of the progress in Gynecology and Obstetrics during the past year. The doctor said that post-partum hemorrhage, its treatment and prevention by anticipation, had occupied the attention of the profession both at home and abroad. Many and learned discussions on this subject had occupied the time of the Societies and the pages of the medical journals. The general conclusion seemed to be that it was surely controlled by the injection of perchloride or persulphate of iron, which might be used even without dilution, and, in the vast majority of cases, without injury. A few observers, among them Dr. Snow Beck, insisted that these injections were highly prejudicial. The other subjects reported upon by Dr. Atkinson comprised almost everything connected with gynecology and obstetric medicine.

Dr. Atkinson reporting in favor of the use of chloral in puerperal eclampsia, the subject created much discussion. Prof. Gross, of Philadelphia, favored chloral, but insisted that the dose must be at least thirty grains, frequently repeated.

Dr. Atkinson also administered it by the rectum when it could not be employed by the mouth.

Dr. Goodell, of Philadelphia, agreed with both gentlemen.

Dr. Hiram Corson, of Montgomery County, took the floor in favor of what is now the unpopular practice of bleeding in cases of puerperal convulsions, pneumonia, pleurisy, and acute hepatitis.

Dr. Atlee, of Lancaster, said he was an "old fogy" in this respect, and related cases where death would have been the result if the use of the lancet had not been resorted to. He had more faith in bleeding, however unpopular it might be, than in bromide of potassium, opium, or the new compound, chloral.

Prof. Gross, of Philadelphia, took the floor again, and said that he wished it distinctly understood that there is at least one teacher in Philadelphia who recommends and insists on the judicious use of the lancet, and he was glad that Mr. Corson had the courage to get up in this enlightened age to advocate the unpopular method of bleeding. He said that fashion rules us too much, and, instead of exercising our own good, strong, common sense, we put too much confidence in men of reputation, especially across in Europe. The day is coming, and now is, that our own authorities in this country should be consulted, and when good sense and sound experience should be followed, rather than fashion.

Dr. G. D. Bruce, of Pittsburgh, referred to the causes of these attacks, necessarily requiring different remedies.

Dr. W. L. Atlee, of Philadelphia, cited an instance in which the subject was bled nearly to death, and until he feared to pursue further bleeding; yet still the convulsions continued. He then gave an emetic, when up came huge chunks of meat, and the patient was instantly relieved. He favored the use of large doses, three to four drops, of croton oil, repeated to hypercatharsis. The irritation of the alimentary canal was, he believed, a great cause of this affection. Similar

remarks were made by Dr. Stites, of Perry County, Dr. Leasure, of Pittsburgh, and others.

Dr. Kieffer, the President, concluded the discussion by a summing up as to the importance of fine discrimination in diagnosis, after which the Society adjourned.

AFTERNOON SESSION.

The afternoon session was held in the chapel of the Reformed Church, being called to order by the President at 2 P.M.

The Permanent Secretary opened the meeting by reading the report of the Committee on additional accommodations for deaf-mutes in the western portion of the State. They had been successful in obtaining an appropriation from the Legislature, had land donated them, and, altogether, very encouraging prospects. The report was signed by Dr. L. Turnbull, of Philadelphia, Chairman. It was received, and ordered to be entered on the minutes, and the Committee was continued.

A paper was also read by the Secretary, from Dr. L. Turnbull, on the Education of Deaf-Mutes.

The writer took the ground that not enough attention was given in our State to teaching the deaf-mute articulation, there being no special institution for the instructing of private pupils, so that we were necessarily obliged to send such applicants to other cities, in New York, Connecticut, and Massachusetts, to receive the advantages of such instruction. But an important change has taken place, not alone in the United States, but also in Europe, in the education of this most interesting class.

Up to a very few years back, the system of teaching the deaf and dumb was exclusively by signs, also a great improvement on their former sad state. In a letter addressed (1873) to his colleagues by M. Léon Vaisse, late director (principal) of the National Institution for the Deaf and Dumb at Paris, upon the occasion of his exchanging the laborious duties of that position for the well-earned repose and dignity he now enjoys under the title of Honorary Director of the institution,* he observes, "In communicating with the deaf, the manual alphabet has the advantage over writing of a greater degree of convenience, inasmuch as it dispenses with all material aid. The manual alphabet, however, may be advantageously replaced in its turn by the labial alphabet, which is far more useful in the ordinary conditions of life.

"It is these exercises in speech that more than anything else can succeed in familiarizing the born deaf-mute with ordinary language, and it is the insufficient practice in them, in the case of too many pupils, that constitutes the weak point of the French system.

"On the special point of the prominence due to articulation in our instruction, I have not succeeded in making you share my convictions. These convictions, however, are of long standing, and are based upon the experience of my personal practice, and upon observation of the movement which of late years has prevailed in so many French and foreign institutions. It is not a question of reviving the old controversy which divided the founders of the French and German schools.

"The teachers beyond the Rhine have ceased to reject pantomime as the first method of intellectual development of their scholars; while, on the other hand, the Swiss and German institutions are not the only ones in which the practice of speech is made an essential element in the education of the child whom we style deaf-mute.

"Among our Northern and Southern neighbors in Belgium, Holland, Spain, and Italy, as well as in Eng-

land and the United States, considerable prominence is now given to this teaching,—in old institutions which have modified their method by the introduction of this new element, and in more recent establishments which have sprung up, besides certain old ones not disposed to modify the principle of their previous method. In France, thanks to the impulse given by M. Fourcade, of Toulouse, as good results in teaching articulation have been and are now obtained in several of the institutions of the departments as have been reached anywhere.

"But now lip-reading or visible speech is becoming the popular mode, and is another advance in the right direction, so as to fit the deaf-mute, no longer dumb, to communicate with society in general."

Dr. Turnbull's paper was referred to the Committee on Publication.

Reports on Meteorology and Epidemics were presented from the counties of Philadelphia, Fayette, Lancaster, Tioga, Adams, Mercer, Schuylkill, Chester, Bradford, Berks, Lehigh, Luzerne, Lycoming, and others. These were referred, without reading, to the Committee on Publication, who will use their discretion as to what and how much shall be published in the Transactions.

A motion was then made, and agreed upon, that all other County Societies be permitted to send their reports to the Permanent Secretary in two weeks.

Dr. Benjamin Lee, of Philadelphia, in presenting the report from Philadelphia County, offered the following:

"Whereas, The interest which at present exists in the scientific world in the question of the comparative merits of cremation and sepulture is, in the opinion of this Society, based upon a well-founded conviction that the latter mode of disposing of the bodies of the dead has in various ways exercised an injurious effect upon the health of the living, and especially by contaminating the sources of their supply of drinking-water: Therefore,

"Resolved, That the several County Societies be, and are hereby, instructed to embody in their next annual reports to this Society a detailed account of the location of the burying-grounds and cemeteries within their respective limits, as related to the springs, reservoirs, or streams on which the neighboring populations depend for their water-supply; including the direction of the water-shed and pitch of the geological strata, an estimate of the purity of the water usually employed for drinking-purposes, and a statement of the more frequent zymotic diseases, and the extent to which they have prevailed during the present conditions as compared with previous periods."

The following test for the purity of the water is suggested as both delicate and reliable: it is that commonly known as *Nessler's test* for the detection of ammonia.

Dissolve 35 grains of iodide of potassium in 3ij 3vj of distilled water; to this add a cold concentrated solution of mercuric chloride, until the mercuric iodide, at first formed and then dissolved by agitation in the solution, at length produces a very small permanent precipitate; 100 grains of caustic potassa are next dissolved in 3vi 3ij of distilled water. Mix the solutions, and add distilled water to make 3xv 3v. This added to water containing .03 grain of ammonia to a gallon will give a yellow color; a larger amount of ammonia, a brownish-yellow color.

Dr. McIntire, Adjunct Professor of Chemistry in Lafayette College, made some remarks upon this test, and upon the difficulty of testing water under various circumstances. Dr. McIntire said that while Nessler's reaction is a most delicate and accurate test for ammonium salts, still much of the animal nitrogen may combine as nitrites, or be oxidized still more into nitrates, which will not be detected by the reagent.

* American Annals of the Deaf and Dumb, January, 1874, 12, 19, 20.

The permanganate of potassium test will show the presence of organic matter, but does not show whether vegetable or animal. While, therefore, if ammonia is shown the water is not good, we may have water showing no reaction with the Nessler solution and yet not proper for use.

The resolution was adopted, and the test referred to the Committee on Publication.

Dr. Allis, of Philadelphia, read a paper upon the *Diagnosis of Obscure Injuries of the Hip*.

He stated that in the March number of the *Philadelphia Medical Times* he called the attention of the profession to the relation the great sacro-sciatic notch bore to the acetabular cavity. That if a pelvis were placed in the position of one lying on his back, the "notch" in the majority of cases will lie *directly below* the acetabular cavity, and from the conformation of the pelvis it would appear possible, and, indeed, very probable, that a dislocation in its direction might not be followed with any shortening of the limb when it is compared with its fellow, on a line with the axis of the trunk. Now, if the limbs are compared at right angles to the trunk, a discrepancy will at once be produced, for the very reason that the head of the bone lies in a new position, an inch or more directly below its normal bed.

(Drawing of a pelvis exhibited.)

The importance of this anatomical feature would appear—

1. In enabling one to determine positively that his efforts at restoration had been successful.

2. In determining complete intracapsular fractures.

3. In determining severe contusions, or incomplete and impacted fractures.

(1) The limb cannot be regarded as restored until its measurements *in the axis* of the trunk, and at right angles to it, correspond.

(2) In complete fractures the usual signs are ever-sion, shortening, and a doubtful crepitus. If in such a case we compare the limbs at right angles to the trunk, while the weight of the sound limb will be sustained by the neck of the femur, the neck of the other being broken, the limb will sink until the trochanteric end shall become arrested by its ligamentous surroundings and thus produce a shortening similar in many respects to the preceding case. Now, to determine that this is fracture and not dislocation, lift the limb to a level with its fellow, and if a force sufficient to overcome its weight will effect this and if on letting go again it sinks an inch or more, it may be confidently asserted that it is fracture of the neck, for if it were a dislocation it would require the strength of one or more strong men to bring the limbs to the same altitude.

(3) Incomplete impacted fractures. This, Dr. A. said, was a feature of the utmost importance, as this variety of fracture was the only one implicating the joint that was likely to result in bony repair.

Rude manipulation in such cases would endanger the impaction and hazard the chances of recovery; hence he enjoined gentleness, warning against an attempt to obtain crepitus. In such a case, place the patient on a level surface, and with no obliquity of the pelvis; notice the relation the limbs bear to each other; then compare them at right angles, and if they still sustain the same relation it may be confidently assumed—

(a) That the head of the bone is in the acetabular cavity.

(b) That no complete fracture is present.

(c) That the injury is a severe contusion or an impacted incomplete fracture, and the nature of the injury, sex, age, persistence of pain, and degree of helplessness, will point out an intelligent and rational course of treatment.

The paper was referred to the Committee on Publication.

On motion of Dr. Murphy, of Luzerne County, Dr. Davis, of Wilkesbarre, was permitted to read his account of a case of vaginal ovariotomy.

Dr. W. L. Atlee evinced much interest in this case, and congratulated Dr. Davis on his success.

Paper referred to Committee on Publication.

The report of Committee on Nominations was then presented by Dr. W. M. Weidman:

OFFICERS FOR 1874.

President, Dr. Washington L. Atlee, of Philadelphia.
Vice-Presidents, Drs. George D. Bruce, Pittsburgh; Rowan Clarke, Antistown; P. B. Breinig, Bethlehem; Alexander Craig, Lancaster.

Corresponding Secretary, Dr. R. J. Dunglison, Philadelphia.

Permanent Secretary, Dr. W. B. Atkinson, Philadelphia.

Recording Secretary, Dr. R. S. Chrisman, Pottsville.

Treasurer, Dr. Benjamin Lee, Philadelphia.

Place of meeting, Pottsville.

Committee of Arrangements, Drs. A. H. Halberstadt, G. W. Brown, J. T. Carpenter, D. W. Bland, L. M. Thompson, O. M. Robbins.

Time of meeting, second Wednesday of June, 1875, at 3 P.M.

Committee of Publication, Drs. W. B. Atkinson, R. J. Dunglison, B. Lee, T. M. Drysdale, L. J. Deal, A. Fricke, Charles McIntire.

Also Censors and Delegates to American Medical Association, and to neighboring State Medical Societies. Report adopted unanimously.

Dr. J. L. Atlee, of Lancaster, then stated that his brother, Dr. Atlee, President elect, being compelled to absent himself by next train to Philadelphia, desired to return his thanks for the honor conferred on him.

Dr. Washington L. Atlee then briefly addressed the Society as follows:

He thanked the members for this honor, quite unsolicited by him. Office should seek the man. He accepted, knowing his want of familiarity with parliamentary usages. To preside over an assembly of professional men whose sole aim is the progress of science, the amelioration of human suffering, the promotion of public health, and the cultivation of social intercourse, must be inspiring.

Medical art and science, as applicable to man, have originated out of the necessities of the race, and belong to all classes. The cultivation of medicine is a common duty, as it partakes of a common interest.

The temple of science is built by all.

He would impress upon all committees the necessity of faithful attention to their duties. It is hoped that none will accept a position without they intend to fully perform their duties. We should have no sinecures. Let us all work. Then our Society will assume a proud position among her sisters of other States, and our annual Transactions will be a monument to our industry and worth.

By these reunions, while we cultivate the best feelings of the heart, we at the same time, by honest brain-work, will add to mental culture, and contribute largely to the stores of medical knowledge.

In conclusion, he expressed the sentiments of every member in acknowledging the courtesies and attention received from the citizens and the profession of this town, nestled as it is in the bosom and embrace of the most romantic and picturesque valleys of the State. Easton, its people, its schools of learning and science, its manufactories, has left an impression upon each of us as durable as the everlasting hills which surround it. Like the waters of the Lehigh and the Delaware, whose trail (Traill) enriches distant parts of the State, our memories will converge from the re-

motest regions to this ever-green (Green) spot in the history of our Society.

Dr. Gross, of Philadelphia, then moved to meet every alternate year at Harrisburg. Decided out of order by the chair.

Dr. Gross then offered it as an amendment to the Constitution. Also objected to. Laid over till next year.

Dr. W. H. Pancoast then followed with the reading of a paper relative to a new operation for ununited fracture of the tibia. Having a case of ununited fracture of the tibia, where, in spite of every method heretofore employed, firm union could not be obtained, he finally, in preference to amputation, as desired by the patient, broke the fibula, having previously weakened it by holes bored with a gimlet, and forced the ends to override, so as to enable the widely-separated ends of the tibia to come in contact. This resulted in a firm bony union, and gave a limb capable of being walked upon.

He also detailed a new method for the treatment of fractures of the femur by means of a chair,—the patient being in a sitting position. When lying upon the back, involuntarily the muscles evert the toes and limb, and thus prevent the broken ends of the bone from coming in contact. But by drawing the patient up so as to rest upon the ischial protuberances, the action of the muscles is to invert the toes, and this brings the ends into apposition.

Both papers were referred to Committee on Publication.

A report from the Treasurer, Dr. B. Lee, was presented, showing a favorable balance in the treasury. Referred to Auditing Committee of Drs. Pollock, Weidman, and Bruce.

Dr. Atkinson, Chairman of Publishing Committee, presented his report, which showed that twelve hundred copies of the last year's Transactions had been printed.

Dr. Sibbet, Chairman of Committee on Medical Legislation, reported progress, and requested that the Committee be continued, with power to fill vacancies, which was granted.

Dr. R. J. Levis, of Philadelphia, was appointed by the chair to deliver the address on Surgery, Dr. Wm. Pepper, of Philadelphia, the address on Medicine, and Dr. Joseph Coblenz, of Reading, the address on Obstetrics, for 1875.

This was followed by the reading of an abstract of a voluminous paper, by Dr. J. Solis Cohen, of Philadelphia, on tracheotomy and its relation to croup, which he had read January 14, 1874, before the Philadelphia County Medical Society. Referred by that body to the Medical Society of the State of Pennsylvania.

The paper in question originates from the published statistics of over five thousand cases of tracheotomy in croup, gathered from sources in both Europe and America, and treats at length on the following points:

1. The indications for the operation.
2. The points of importance connected with the operation itself.
3. The after-treatment of the disease and of the surgical wound; and
4. The casualties which prevent recovery.

Among the statistics given is a very remarkable table of successes at a very early age, all of them in cases under two years of age; one, indeed, at as early a period as six weeks.

Dr. Cohen does not adhere to the idea that croup is identical with diphtheria, though he admits a relation analogous to that which typhoid pneumonia has to pneumonia.

He thinks that there is a peculiar systemic poisoning in diphtheria which is not present in sthenic croup; his paper is based, however, upon both forms of the disease, considering the demands for tracheotomy to be equally imperative at certain stages.

The doctor also states that not a single case is recorded of recovery after tracheotomy for diphtheria in the adult, accounting for this by the supposition that the comparatively large size of the larynx in the adult does not entail the danger from suffocation that is met with at a similar stage of the disease in the infant; therefore the blood-disease progresses to a fatal issue before there is much mechanical interference with respiration.

Time will not permit of further pursuing the doctor's line of argument for and against tracheotomy in croup, but, in conclusion, we give the rules which he deems safe to adopt:

1. That there are no insuperable contra-indications to tracheotomy in croup.
2. That the administration of an anæsthetic is admissible in performing the operation for the purpose of controlling the child's movements, but should be used with great caution.
3. That a careful dissection should be made, and hemorrhage arrested before incising the windpipe, whenever there is at all time to do so.
4. That the incision should be made into the trachea as near the cricoid cartilage as possible, to avoid excessive hemorrhage and subsequent accidents which may occasion emphysema.
5. That a dilator should be used, or a piece of the trachea be incised, if there is any difficulty in introducing the tube.
6. That the tube should be dispensed with as soon as possible, or altogether if the case will admit of it.
7. That assiduous attention should be bestowed upon the after-treatment, especially that of the wound, and that a skilled attendant should be at hand promptly for the first twenty-four or forty-eight hours immediately after the operation.

Entire paper referred to Committee on Publication. Committee on Unfinished Business, reporting no items, were dismissed.

The next thing in order was a paper offered by Dr. J. M. Junkin, of Easton, which was read by the Permanent Secretary.

Case in which Life was Saved by Transfusion.

Some years ago I saved the life of a patient by transfusion. As no account of the case has been made public, I lay before you the simple means I used, which proved successful, thinking they would be valuable to other physicians under similar cases.

I was called to attend Mrs. F. about 10 P.M.; found the patient flooding fearfully, from abortion at about six weeks; she was much prostrated from the loss of blood; pulse scarcely perceptible at wrist.

I immediately stopped the blood by a tampon of soft rags, removed pillows from beneath the head, gave stimulants, but the patient still continued to sink; then raised the foot of the bed to retain all blood the patient still had in the brain, and continued this elevation of the patient until she had to be held to prevent her head from pressing against the head of the bed; pulse still feeble, not perceptible scarcely, even at carotid artery.

I then said there was no chance of saving her life, except by giving her more blood, and that from another person, upon which her husband immediately offered his arm; but now another difficulty presented itself: how could we transfer this blood? No instruments at hand, and some distance in the country, and every second shortening the patient's life.

Asked for a syringe; was brought one, a glass, female, with a curved neck, and a bulb on the end of it; at first, thought it would not do, but remembering glass would melt, ran to the fire, thrust it in until softened, drew it out into a slender tube, broke off the end to a proper size, then placed it on the fire to smooth the end, then back to my patient; tied up the husband's

arm, drew several ounces of blood; then told him to place his finger on the orifice, filled the syringe, opened a vein in the arm of the patient, and forced as much blood as possible therein. About two ounces passed in. It was not necessary to repeat this operation, the husband's blood being of a very rich quality, and in a few minutes the patient revived, pulse slowly increasing; by daylight was able to lower the bed a little at a time to its level, and in a few hours to place a small pillow under her head.

The recovery was then rapid and complete. A little more than a year after, I delivered the patient of a large healthy child.

Referred to Committee on Publication.

Committee on Memorial for a new Insane Hospital, represented by Dr. John Curwen, of Harrisburg, reported as follows. A memorial had been prepared and extensively circulated, as the Society desired. A bill had passed the Legislature, which would be signed by the Governor. Also another bill had passed this week, but was directly in opposition to the views of the Society.

He requested the entering of these on the minutes, and the continuance of the Committee, which was granted.

After some remarks from Dr. Green on the Alms-house Insane Department of Northampton County, Dr. Wood, of Pittsburgh, moved that said Northampton County Medical Society be requested to furnish copies of the report of the Committee on the Condition of the Insane in the County Almshouse to the different county Medical Societies of the State, which motion was carried.

A resolution of amendments to the Constitution, to make it harmonize in all its parts with amendments adopted to this session, was offered by Dr. Stetler, and carried.

The following was then offered by Dr. Curwen:

Resolved, That the Committee on Publication be requested to examine carefully the Constitution and By-Laws of this Society, in order to arrange the phraseology and make such modifications as may be necessary to place the whole in a connected and harmonious form. Carried.

The Treasurer's accounts were reported correct by the Auditing Committee, who were then discharged.

Mr. Seamen, on motion by Dr. Lee, was then permitted to exhibit and explain a wheeled crutch and some splints.

Mr. Molesunth was also permitted to exhibit his dilators, uterine syringe, etc.

The Corresponding Secretary's report was then read by the Permanent Secretary.

It showed the addition of several new county Medical Societies. Also the report of the majority of Censors in the case of Dr. Findley and the Blair County Medical Society.

A minority report on this subject from one Censor was then read by the Secretary, but negatived by the President, as he decided the majority report final.

Dr. Crawford appealing from the decision of the chair, the question was put, but the majority sustained the President.

Dr. Curwen then moved that one member be appointed to prepare a report on Hygiene, and also one on Mental Disorders, such report to be read each year before the Society.

The following gentlemen were then appointed by the President: Dr. B. Lee, of Philadelphia, on Hygiene; and Dr. John Curwen, of Harrisburg, on Mental Disorders.

The Society then adjourned.

THIRD DAY.

The Society assembled in the Reformed Church, at 9 A.M., the President in the chair. The first thing

in order was the reading of the minutes, which were approved.

The following was then offered by Dr. John L. Atlee, of Lancaster:

Whereas, This Society has heard with great regret of the death of our ex-President, Dr. Wilmer Worthington, one of the earlier proposers of the formation and organization of this Society;

Resolved, That in the death of Dr. Worthington the medical profession has lost one of its brightest ornaments, the people of the State one of their most generous and actively humane benefactors, and society the intercourse of a highly cultivated Christian gentleman.

Resolved, That this resolution be communicated, with our sincere condolence, to the family of Dr. Worthington. Unanimously carried.

A resolution to the effect that the thanks of the Society be returned to the Reformed Church for the use of the chapel, to the Trustees of Lafayette College for the use of their beautiful Pardee Hall, and for the courtesies of the President and Faculty during our stay at Easton, was offered by Dr. Jas. King, of Pittsburgh, and unanimously adopted by the Society.

On motion of Dr. Green, the following resolutions were read and adopted;

Resolved, That the thanks of this Society be presented to all its officers for the faithful manner in which they have attended to the duties of their respective offices.

Resolved, That the thanks of this Society be presented to the reporters of the proceedings of our meeting, and the editors of the papers—*The Free Press* and *Evening Express*—for the publication of the same. Adopted.

Dr. Curwen then moved that it be resolved that the Medical Society of Pennsylvania earnestly urge upon Congress the passage of the bill, now before them, to give increased rank to the medical corps of the United States Army, and thus open it to appointment and promotion.

Dr. Crawford moved that the thanks of this Society be tendered to the Northampton County Medical Society, and to the citizens of Easton, for their kindness and courtesy extended to us during our stay with them.

Both motions agreed to unanimously.

Then, with a few well-chosen and pleasing remarks from the President, the Society adjourned, to meet on the second Wednesday in June, 1875, at Pottsville, at 3 P.M.

GLEANINGS FROM OUR EXCHANGES.

HERPES GESTATIONIS.—Dr. L. Duncan Bulkley, in the *American Journal of Obstetrics* for February, 1874, gives an able and interesting paper upon a rare and peculiar affection of the skin, which he describes under the name of herpes gestationis. An accurate report of a case which came under his observation is presented, as well as an analysis of eight other cases which have been noted in literature. The disease consists in the development of erythema, papules, vesicles, and bullæ, attended with intense itching and burning, commonly grouped, but not following any special nerve-tracks, appearing generally on the extremities, and afterwards involving the greater part of the body. It is an affection directly dependent upon the gravid state of the uterus. It may appear at any period of gestation up to the seventh month, and usually continues until after delivery. It does not terminate at once, but slowly retrogrades, by the development of fewer and fewer vesicles, rarely remaining, however, as long as a month after delivery. The disease is non-febrile. The eruption may occur very early in pregnancy, and is apt to

return with succeeding gestations. It is sometimes accompanied and followed by other neurotic troubles, as urticaria, neuralgia, etc. The disease must not be confounded with eczema.

The treatment which Dr. Bulkley employed with success consisted in strong tonics, with antipruritic local applications. Iron, quinine, strychnine, and arsenic were used from time to time, together with a dietary regimen, consisting of a meal of oatmeal or bread and milk just before retiring. The recumbent posture was also insisted upon. Locally, a wash composed of *pix liq.* 3ii, caustic potassa 3i, water 3v, one drachm of which is to be diluted with four ounces of water, was used with benefit in allaying the itching from which the patient suffered.

Dr. Bulkley adopts the term herpes gestationis, proposed, we believe, by Mr. Milton, of London, embodying, as it does, the clinical characters of the eruption, and at the same time denoting the sex and condition of the patient in which it occurs.

DOUBLE ANEURISM OF THE FEMORAL AND POPLITEAL ARTERIES (*The Lancet*, April 11, 1874).—Dr. Thomas Diver reports a case of aneurism in the femoral artery just below Poupart's ligament and in the popliteal. He ligated the external iliac artery. Gangrene of the part followed, and necessitated amputation at the lower third of the thigh. This was followed by entire recovery.

NOTES AND QUERIES.

"No, Betsy, drink fair, wotever you do."—*Sairey Gamp*.

TO THE EDITOR OF THE PHILADELPHIA MEDICAL TIMES:

As a subscriber, I feel the right to scold you roundly for articles in the last two numbers.

Why will you persist in saying that the staff of the Pennsylvania Hospital is responsible for the century-old advertisements which seem to bother you so much? You know as well as anybody that the staff has never had anything whatever to do with them.

So far as inquiry can be made, no member of the staff is able to trace a private patient as coming to him through the advertisements, while on the contrary all classes of persons have been led by them to seek the proper officers and to find the right way to avail themselves of the charity of the hospital.

In the guise of a "Slowtown" letter you admit a mass of common but none the less insufferable cackle about Philadelphia—its trade, its schools, and everything about it going to the devil generally.

Now, if a doctor has any power of observation whatever, who knows better than he that [all this is unmitigated nonsense? A closet-man might, by repetition, be made to believe it, but a doctor who drives and walks through every section of the city knows better. Philadelphia has its ups and downs, like every other place, but its general progress in growth, and necessarily in trades and occupations, is truly marvellous. With all its defects, many exceptional things, when contrasted with other cities, can be claimed and proved in its favor. Who better than a physician, for example, can appreciate the way in which its working-people are housed? Could this be so if there was nothing for them to do?

Now, Mr. Editor, don't foul your own nest any more. Write us up instead of down. Protest against the bad, but credit us with the good. Don't growl all the time, but let us understand that when you do growl it means something.

Yours truly,

To scold is generally considered the especial prerogative of maidens soured by time and disappointment. In the above letter there is a sort of recklessness as to facts, and especially as to common sense, which would indicate such an origin. We think most of our readers will agree with us, however, that the internal evidence is very strong that it was written by one of the Pennsylvania Hospital staff, for it is doubtful if, outside of the staff, any one could be found to defend the advertisement. At any rate, the letter must have been inspired by members or a member of the body concerned, and we think "our growl must mean something," when the rulers in Israel are brought by it to appear at the bar of public opinion. Our correspondent's defence is so original that he will find it all anticipated, and, as we think, demolished, in one of our earlier editorials, but certainly he must be trading upon the supposed imbecility of his readers when he

intimates that a man is not responsible for the *permitted* use of his name. In the orthopaedic advertisement recently published in our columns Dr. Sinkler's name is conspicuous by its absence,—an absence due to his having objected to its being there, before, be it said to his credit, the *Times* had published a word upon the subject. Since we have ventilated the matter, Dr. Hunter, one of the out-patients' staff of the Pennsylvania Hospital itself, has requested his name to be withdrawn from the advertisement, and his request has been complied with by the Board of Managers. In the face of these facts it certainly requires a good deal of buccal development to assert soberly that the staff are not responsible.

We never have in any way admitted a "mass of cackle" about Philadelphia generally, unless one sentence makes a mass. We know as well as our correspondent that it is probably the most comfortable city in the world, but we also know as well as he does that the tender-hearted anti-progressionists, of whom he seems to be a type, have been as a nightmare upon us, and have driven very much of the best talent in all businesses out of our city, have destroyed its commerce, and banished its literati. The recent revival in trade and life is due to the discontented—the growlers; and all we hope for is that the strength of our medical schools is not so sapped by contented glorying in the past that the growing element of discontent cannot restore their former prestige.

No doubt the oxen of the Aegean stables upbraided Hercules with fouling their nest, when he stirred up the mighty mass of filth and let loose the mephitic odors; but let us say in brief to our correspondent that the nest is fouled not by those who try to cleanse it, but by those whose nostrils by habit have become so used to the odor that they do not perceive it, and who sit quiet in the old places while power and supremacy are slipping away; who morning and evening dote upon their greatness, whilst the world is laughing at them, and who only raise their voices when disturbed in their lethargic slumbers.

We intend, if possible, to write Philadelphia up, but not by singing the old time-worn lullabies of her ancient greatness, her present perfections, and her wonderful homes for working-people. Rather let our note be some battle-cry, which shall awaken the sleeping giant to a sense of the necessity for effort.—*Ed. P. M. T.*

OBITUARY.

At a called meeting of the Zanesville Academy of Medicine, held Saturday, May 2, to take action in relation to the death of its late Fellow, Dr. Jno. G. F. Holston, Sr., which took place at Washington, D.C., May 1, 1874, the following resolutions were adopted:

That we, whose occupation has been to relieve human suffering, are reminded that the time must come when our places on earth shall be vacated. Therefore,

Resolved, That in the death of Dr. Holston the Zanesville Academy of Medicine loses one of its prominent members, and the profession at large an eminent physician and surgeon of extensive professional and literary culture, ripe in experience and accurate judgment; and society a warm-hearted, genial, and generous member, whose life has been mainly devoted to the good of his fellow-beings.

Resolved, That we attend the obsequies of our deceased Fellow, in a body.

Resolved, That we deeply sympathize with the family and relatives of the deceased.

Resolved, That the Corresponding Secretary transmit a copy of these resolutions to the family, the city press, and the medical journals.

C. C. HILDRETH, Chairman.

A. E. BELL, Secretary *pro tem*.

OFFICIAL LIST

OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U.S. ARMY, FROM MAY 12 TO MAY 18, 1874, INCLUSIVE.

TOWN, F. L., SURGEON.—To proceed to Fort Sill, Indian Territory, and on arrival report by letter to the Commanding General Department of Texas, for assignment, so much of S. O. 96, c. s., A. G. O., as directs him to report in person, having been revoked. S. O. 105, A. G. O., May 13, 1874. Relieved from duty at Fort Preble, Me., S. O. 98, Mil. Div. of the Atlantic, May 14, 1874.

McCLELLAN, ELY, ASSISTANT-SURGEON.—To take station at Louisville, Ky., and from that place visit the towns and localities at which cholera prevailed during the year 1873, as designated in instructions given him by the Surgeon-General. S. O. 103, A. G. O., May 11, 1874.

PATZKI, J. H., ASSISTANT-SURGEON.—Assigned to duty at Fort Fred. Steele, Wyoming Territory, S. O. 65, Department of the Platte, May 9, 1874.

HOLDEN, LEVI H., SURGEON (Retired).—Died at Vineland, N.J., on May 12, 1874.

SATURDAY, MAY 30, 1874.

ORIGINAL LECTURES.

CLINICAL LECTURE

ON A CASE OF CEREBRAL RHEUMATISM, SO CALLED.—USE OF COLD BATH.

BY H. C. WOOD, M.D.,

Clinical Lecturer on Diseases of the Nervous System in the University of Pennsylvania.

GENTLEMEN,—A few days since, upon entering the ward my attention was instantly attracted by the expression upon the face of a patient. He was a young, temperate Irishman, twenty years of age, and of vigorous physique, who had passed through a severe attack of inflammatory rheumatism without cardiac complications, and was suffering from a relapse, which first appeared as a subacute inflammation of the knee. I had not seen the man the previous day, but I find in the note-book of my very able resident, Dr. Bruen, the following:

"Second day of relapse. This morning an acute inflammation of the wrist-joints has set in; the fever is very high; temperature in the axilla 104° Fahr.; ordered potassii bicarb. gr. xx every two hours."

As we walked to the bed, in reply to a question, "What ails our rheumatism patient?" Dr. Bruen said, "Nothing, unless it be pericarditis. When I saw him at 10.30 A.M. there was much less inflammation of the joints than the preceding morning, and although his temperature was as it had been, 104° Fahr., and, as I thought, a pericardial friction-sound could be heard, yet the man was doing fairly: perfectly rational, with a good pulse." It was now about half-past twelve, and our patient was apparently dying. The pulse was between 160 and 170, exceedingly feeble and thready; the pupils strongly contracted, though not to pin-points; the respirations fifteen per minute, exceedingly irregular, mostly deep, jerking, and interrupted; the skin pale and dry; the consciousness completely lost, violent shaking and shouting in the ear only eliciting a few grunts; the temperature in the axilla $108\frac{1}{2}^{\circ}$ Fahr.; the wrists pale, and no signs of pain elicited by violently moving them. On ausculting the heart I could find no murmur; the first sound was very feeble, somewhat prolonged, and the second, sharply accentuated.

It was very evident, gentlemen, that if this man were left to nature he would die, and that most speedily. As a contrast to what happened under treatment in the man now hale and hearty before you, and as portraying the natural history of this disorder, let me read you the following account of a case that occurred here a few weeks since, and was in a measure left to nature:

Charles M., æt. 40, of German birth, was admitted to the hospital March 6, 1874, suffering from acute articular rheumatism. On March 11 he was seemingly much better, the pain having left him, and the redness of the joints diminished; but the resident physician in the morning noticed that he was very drowsy. At 10 P.M.

the resident physician was summoned by the nurse, who said that the man had apparently taken an over-amount of opium, of which large medicinal doses were being given him. The man was found unconscious, lying quiet and motionless, with slow, rather deep respirations. He was aroused with difficulty by vigorous shaking, and was able to put out his tongue, but could not speak. He had a dull, dazed expression, and appeared like a man who was mildly narcotized, so that the resident, agreeing with the nurse, ordered strong coffee and watching.

At midnight the doctor in charge was again sent for. The patient had lost the power of swallowing, and could not be aroused at all; but he showed signs of uneasiness when roughly pinched or pricked with a pin. His respirations were 18; pulse 160. Eight ounces of blood were taken by cups from the back of his neck, three drops of croton oil administered, and external counter-irritation freely made. About 1 A.M. the resident's attention was attracted to his intensely hot skin, and on thermometrical examination the temperature was found to be $110\frac{3}{4}^{\circ}$ F. It did not fall below this up to death, which took place about 4 A.M. A careful autopsy was made, but no lesion whatever could be found, unless it were a doubtful congestion of the brain.

In order to treat my case intelligently, it was of course necessary to determine first the nature of the frightfully sudden exacerbation which threatened his life. In the course of inflammatory rheumatism there happens every now and then exactly what occurred in our patient,—an apparent disappearance of the external symptoms, a sudden rise of temperature, the development of the most severe nervous disturbance, all ending in death. This is the so-called "cerebral rheumatism." What is its essence or nature? What the sequence and relation of its phenomena? Of the real essence or nature of rheumatism we know scarcely more than did our asserted simian progenitors before Adam was. We can, however, I think, say, in accordance with our clinical knowledge, that there is in the system a something, a poison, an irritation,—in our ignorance one term is as good as another,—an influence which flits from part to part, seemingly subject to no laws and perfectly whimsical in its movements.

Is cerebral rheumatism, then, simply the result of a retrocession of this agent to the nerve-centres? are the unconsciousness, the motor, respiratory, and circulatory disorders, simply due to a direct action of the rheumatic influence upon the nerve-centres? Gentlemen, I say no; and I hope to convince you of the truth of this denial. If the spinal cord be cut just below the origin of the respiratory nerves, and the animal, by being wrapped in cotton or by being placed in a warm atmosphere, be protected from the great loss of heat by radiation which follows the paralysis of the peripheral vessels, a rise of temperature occurs, and progressively continues until the animal dies in a frightful fever. What does this mean? To my mind, it means that there is an inhibitory heat-centre at the base of the brain, or, in other words, a ganglion, which controls and regulates those chemical changes whose outcome is "animal heat." The circulation is greatly lessened in its activity by the section of the cord, and it seems hardly probable that the stagnant blood-current of

vaso-motor paralysis should of itself cause a rise of temperature. I have, however, not time this morning to reason out this matter before you. So far as concerns the present case, the only lesson of importance is distinctly taught by the experiment, —namely, that there is somewhere in the brain a centre which controls the heat-production of the body directly or indirectly, and whose paralysis is followed by violent fever.

With this light it is easy to explain the high temperature which was present in our case. The rheumatic poison or influence did so affect this centre that upon the second day of the relapse the temperature rose to 104° F., and upon the third day, the paresis of this centre deepening into paralysis, the axillary temperature went to $108\frac{4}{5}^{\circ}$ F.

Unfortunately, we have no observation to show whether there was a palpable transfer of the rheumatic irritation from the joints to this centre. There may or may not have been.

Having found the method in which the temperature was in this case elevated, we have, gentlemen, discovered how the nervous symptoms were produced, for I insist that they were not the result of rheumatic influence acting upon the brain or its membranes, but were solely due to the excessive heat. Do not mistake me. I do not claim that there never is a "cerebral rheumatism" in which the cerebrum is directly affected by the rheumatic agent, but I maintain that in the present case this did not happen; that the excess of heat was the poison, and that the reason the rheumatic influence was so completely lost in the joints was not so much that it had migrated from them as that it was overwhelmed and imperceptible amidst the general wreck. I may further add that, in my opinion, very many of the cases of cerebral rheumatism have the same pathology as the present. The proof which I shall adduce in favor of the view enunciated may be summed up in the following propositions: First, that the temperature present would of very necessity cause nervous symptoms exactly like those which were actually present in our patient; second, that removal of the excessive heat was followed by instantaneous relief of the nervous symptoms.

First. As is well known, exposure of man to heat produces a disease known as sunstroke; and I call your attention to the similarity of the symptoms of that disease with those of the case before us. The suddenness and the terrific force of the onset, the biting, dry skin, the high temperature, the contracted pupil, the unconsciousness, the irregular breathing, and the exceedingly rapid pulse, are all common features, and are almost the sole features of each disease: in the one case you see a counterpart of the other. I have elsewhere proven that the poison of sunstroke is heat. Time fails, and I cannot go over the experiments in detail, but can only sketch a few prominent features of my investigation. It was found that heating produces in animals a sunstroke exactly simulating the disease as seen in man. As in experimenting it was possible to eliminate all other factors, it was distinctly proven that heat is the sole cause of thermic fever. Further, by a simple mechanical contrivance the brains of animals were

heated without the remainder of the body being affected, and the same sudden loss of consciousness, contraction of pupils, and respiratory disturbance as are present in sunstroke were developed just at the time when the brain reached the point respectively attained in thermic fever in the various species of animals employed. It was found that a temperature of 113° – 114° F. was fatal to the brain of a cat. The normal temperature of a cat is 102.5° F.; of a man, 98.5° F. The brain of the cat is probably less sensitive than that of man, because less highly organized. In our patient we found, late in the case, that the rectal temperature was two degrees higher than the axillary, and without doubt his brain-temperature when first seen was at least 110° F.,— 11.5° F. hotter than normal. In the cat a cerebral heat-increment of 6° F. will cause violent convulsions, with unconsciousness, and one of 11° F., complete brain-paralysis.

Evidently, our first proposition is proven. By reasoning similar to that which has been gone through before you, I came to the conclusion that our patient was dying of heat, and determined to cool him at all hazards, and, as the surest and most rapid means, to employ the cold bath.

The following is the record made at the time:

1.24 P.M.—Patient put in a full bath at 60° F.

1.25 $\frac{1}{2}$.—Shows signs of consciousness; will put out the tongue when loudly asked to do so.

1.27.—Seems to recognize the bath is very cold, and struggles to get out.

1.30 $\frac{1}{2}$.—Man has a fair degree of rationality. He has been in six minutes and a half, and now ordered to be taken out at once.

One minute after the bath.—The patient was partially wiped and laid directly upon a gum blanket, and covered only with a sheet, in a room whose temperature was about 65° to 70° F. He has just received a hypodermic injection of six grains of quinine.

Three minutes.—Temperature, in axilla, 94° F.; in mouth, $105\frac{3}{5}^{\circ}$ F.

Eight minutes.—Temperature has been steadily falling; is now 103° F. in mouth. The man has become perfectly rational, and answers to his name.

Pain and sensibility have returned somewhat to the wrist. Ice-bladders were applied to head ten minutes after bath. The attendants state that he passed a very little urine at 11 o'clock; bladder is now entirely empty.

Twenty-four minutes.—Temperature in mouth $104\frac{3}{5}^{\circ}$.

2 P.M.—Pulse 140, weak. One-half fluidrachm of tincture of digitalis, with two ounces of raw whisky, were given.

2.45.—Temperature in mouth 101° , in axilla 102° , in rectum $102\frac{3}{5}^{\circ}$.

4.15.—Digitalis and whisky were repeated, but were immediately vomited. Pulse 140; temperature $101\frac{3}{5}^{\circ}$. No urine had yet been secreted into the bladder. He was cupped ten ounces of blood over the kidneys. Ordered an enema, also \mathfrak{z} ii of acetate of potassium ordered every two hours, with two ounces of infusion of digitalis applied on cloths to abdomen. Small quantities of milk and lime-water were given at intervals.

8 P.M.—The patient says he feels very much better; recollects nothing of the past, excepting that in the morning he was very dizzy, and just afterwards became unconscious. Application of digitalis renewed. Pulse 128, temperature $102\frac{1}{5}^{\circ}$.

12 midnight.—Pulse 116, much stronger; temperature $99\frac{1}{2}^{\circ}$. Complains of feeling cold, but in other

respects is better. Has passed about a pint of urine. Since his bath he has been lying on the gum blanket, covered only by a sheet, as at first. He is now ordered to be put into a warm bed, and covered with blankets. Ice still kept applied to head. Other treatment continued, excepting the digitalis-poultice.

April 9, 9 A.M.—Is much better. First sound of heart very weak; second sound very strongly accentuated, both pulmonary and aortic. There is no murmur.

Was ordered to take, during day, \mathfrak{ss} citrate of potassium, in one-half pint of water, every two hours; ten drops tincture of digitalis, and two grains quinine, every three hours; one-half pint milk every four hours. Temperature $100\frac{1}{2}^{\circ}$, pulse 120.

At 12, temperature $101\frac{1}{4}^{\circ}$, pulse 124.

3 P.M.—Temperature 101° , pulse 120.

8 P.M.—Treatment all carried out, excepting the milk, which caused great nausea and vomiting; it was therefore given one ounce at a time, and about one pint, with eight ounces of beef-tea, was retained during the day. Medicine was all retained without difficulty. He has passed urine freely during the day,—about three pints in all. Temperature $102\frac{1}{2}^{\circ}$ F., pulse 122. He complains of severe pain in wrist-joints and in the shoulders. Treatment continued during night, when awake. Five-grain Dover's powder ordered; the same dose to be repeated at 12 o'clock, if awake.

April 10, 9 A.M.—The patient slept during the past night, for the first time since the 8th. Took his medicine without any nausea being experienced. Says he feels much better. Ice-cloths to head discontinued; other treatment continued. The condition of joints of wrists and shoulders is about the same as on the morning of the 8th: they are very swollen and painful. Pulse 120, temperature 101° F.

6 P.M.—Condition as in morning. Has taken one quart of milk during the day. Temperature $100\frac{3}{4}^{\circ}$ F., pulse 116.

April 11.—Temperature $100\frac{3}{4}^{\circ}$ F., pulse 92. Quinine sulph., fifteen grains daily, ordered. Digitalis and the potassium salt continued.

April 12.—Is very much improved. Pulse 96, temperature 100° . Citrate of potassium ordered every three hours; thirty drops tincture of digitalis in twenty-four hours.

April 14.—Feels very little pain in joints, has good appetite, and looks, indeed, almost well. Citrate of potassium discontinued. Iodide of potassium, ten grains, t. d.; tincture of chloride of iron, gtt. xx , t. d. Quinine continued. Temperature 99° , pulse 72. Tincture of digitalis stopped.

May 4.—From the time of previous note he steadily progressed towards entire convalescence under a tonic treatment, and has been for some days going about freely. To-day he is to be discharged, perfectly well. There is no cardiac lesion whatever.

Let me call your attention, gentlemen, to the rapidity with which, under the influence of the cold bath, the symptoms abated in our patient. He was not in more than a minute and a half before he exhibited very distinct signs of returning consciousness, and in three minutes had sense enough to attempt to get out of the tub. What could the bath do to affect the man so much but withdraw the heat, which, as you know, we have found to be a poison to the nervous system? That the heat was withdrawn, the thermometer proved. If the drowsiness had been due to simple congestion of the brain, very certainly would the bath, by driving the blood from the surface, have increased the trouble. It has been distinctly proven by various

physiologists (see paper by Dr. T. Lauder Brunton, St. Bartholomew's Hospital Reports, vol. vii.) that heat directly increases the rapidity of the heart's action, and in our patient the intensely rapid pulse became slower under the influence of the bath. In what way could the bath do this, unless it were by the withdrawal of heat from the body? Indeed, without further discussion, I claim that the above record establishes my second proposition, and that it has been proven that heat was, in this case, the agency that would have hurried our patient into the grave had it not been for the friendly bath-tub. The sudden change from death to life was, to me, intensely interesting, not only because the stake was a human life, but also as a matter of a wider scientific interest.

I have often produced in the lower animals the symptoms which were present in our patient, and, plunging the animal into a cold bath, watched the fall of bodily temperature, the rise of temperature in the water, and the disappearance, *pari passu*, of the nervous symptoms.

The experiment upon man and the experiment upon the lower animal, exactly similar in their course and results, furnish a new demonstration of the falsity of that narrow and ignorant though popular philosophy which looks upon man as something physically apart from the rest of the living creation, and fails to see that, bone of its bone and flesh of its flesh, the human is subject to the same influences and dominated by the same laws as the animal.

There is one point in the treatment to which I want to call your attention, namely, that the patient was taken out of the bath before his temperature had nearly reached the normal point. I did this because I have noticed in animals that the temperature often continues to fall after removal from the bath, and, if the latter be continued too long, may go down far below the normal point. Thus, I have exposed a pigeon, having a normal temperature of $109\frac{1}{2}^{\circ}$, in a hot-air chamber, and, when the temperature had risen to $117\frac{1}{2}^{\circ}$ F., plunged the bird into water; taken it out when the temperature was $109\frac{1}{2}^{\circ}$, and in the course of twenty-five minutes seen the temperature fall to 96° , although the bird was put in a warm place. No doubt some of this excessive fall was due to the wet feathers; but I have seen the same thing in quadrupeds, and believe that in the use of the bath in cases like the one now under consideration there is a possibility of carrying the effect too far, and of actually depressing, to a fatal extent, heat-production. In ordinary fevers this danger is, of course, less than when the original rise of temperature has been from a transient cause.

In most cases of cerebral rheumatism there is a very manifest tendency for the reduced temperature to rise again, and the question is a most vital one why, in the present instance, no such inclination showed itself. Very probably the hypodermic injection of quinine had some decided influence, since, although the alkaloid has very little effect in reducing normal temperature, it does appear to exert a very decided antipyretic action when the temperature is above normal. I believe, however,

that the prevention of relapse was largely due to what seems to me the boldest part of the treatment. Remember, the man was suffering from acute inflammatory rheumatism, and, a few hours before, a council of our most experienced residents had diagnosed commencing pericarditis; yet the patient was plunged into a cold bath, taken out of it, and, without being wiped dry, laid upon a cold rubber blanket, covered only with a sheet, and so left in a cool room for many hours. What seemingly could be better calculated to bring on fatal internal rheumatic inflammations? Yet no pericarditis developed itself; only a steady convalescence, from a condition formerly considered almost of necessity fatal.

What was the reason? I believe it was partly because the circulation was steadied by large doses of digitalis, but chiefly on account of the high temperature. How can you chill a man whose body is burning up, and whose circulation is filling every extreme arteriole and capillary under the greatly increased arterial pressure caused by the digitalis? I do not want, however, to see you recklessly follow the treatment of the present case, at least so far as concerns the after-exposure of the patient.

"One swallow does not make a summer," and in departing so widely from the old paths we are treading untried ground. If I had been on the spot, this exposure would not have been so long continued. When the temperature showed indications of falling below 102° , the man ought to have been placed in bed and lightly covered.

The case, gentlemen, would afford much food for further discussion. It would be especially interesting to study the use of digitalis as a stimulant, in this connection; but our hour has expired, and the record must be left to tell its own story.

ORIGINAL COMMUNICATIONS.

THE LOCAL TREATMENT OF PULMONARY CAVITIES BY INJECTIONS THROUGH THE CHEST-WALLS.

BY JAMES H. HUTCHINSON, M.D.,

One of the Attending Physicians to the Pennsylvania Hospital.

THE attention of the readers of the *Philadelphia Medical Times* has been recently called to this method of treatment of the third stage of phthisis pulmonalis, by Dr. William Pepper, who resorted to it in three cases with great advantage, he thinks, to the patients. By a coincidence which is not infrequent in medicine, Dr. Mosler has been trying the same experiment in Germany, and has published an account of it, which reached this city after Dr. Pepper's paper was in press. It is not necessary to give details of these experiments further than to say that Dr. Pepper injects into the cavity, by means of Dieulafoy's aspirator, from four to ten minims of a very dilute Lugol's solution of iodine (M^{iv} to f^{ij}), and that Dr. Mosler, after making a perforation, —the means by which this was done are not given, —introduced a silver drainage-tube, which appears to have been allowed to remain in the body until the death of the patient, four months after the

operation. During life, the tube was not merely used to permit the escape of secretions, but also served as an avenue to introduce various medicinal substances into the cavity. We of course recognize a difference between these two sets of experiments, inasmuch as in one the employment of the aspirator probably prevented the entrance of air into the cavity, and in the other this was allowed to take place freely. We cannot, however, regard this as a very important distinction, since there is almost always an uninterrupted communication through the bronchi between excavations in the lungs and the outer air. Moreover, Dr. Pepper says, in concluding his paper, that he should have no objection to use a trocar and canula, and to leave the latter permanently in the wound.

We need not say how cordially we should welcome any operation or remedy which afforded a reasonable hope that it would be found to be useful in reducing the mortality from phthisis, or even in prolonging life after the formation of vomicae. For, although we do not admit that the existence of a cavity is necessarily an indication of a speedy dissolution, we agree with Dr. Pepper in thinking that when the disease has arrived at this stage we possess but little power to stay its downward course. Both of our experimenters speak of their plan of treatment as affording this hope, and, moreover, appear to think that it is novel. It is in these points of view that we propose to criticise it; and first, in regard to its novelty.

In the London translation of Baglivi's *Practice of Physick*, published in 1723, we find the following passage, which we quote just as it is printed:

"A Phthisick arising from an Ulcer is commonly branded as incurable, upon the Plea that the Ulcer is internal and occult, and cannot be cleansed like other external Ulcers. But why do they not make it their Business to find out the true Situation of the Ulcer, and make an Incision accordingly, between the Ribs, to the end that proper Remedies may be conveyed to it? For my Part, I know no Reason why that should lie neglected. About Seven Years ago, when I was at Padua, a Man received a Wound in the Right side of his Breast, that reached to his Lungs; and, employing an able Surgeon, had an incision made between the Ribs to the Length of Six Fingers' breadth, in order to discover the Situation of the Wound in the Lungs, which was perfectly cured in Two Months' Time, with Vulneraries, applied with Tents and with Syringing. Now, Practitioners ought to use the same Piece of Diligence in curing a Phthisical Ulcer in the Lungs, lest the Scroll of incurable Diseases should grow too long, to the infinite Disgrace of the Profession."

As Baglivi's work was published in 1696, we have sufficient evidence in the above that the propriety of establishing a communication between the lungs and the outer air through the walls of the chest, for the purpose of applying remedies directly to the seat of the disease in cases of phthisis, was entertained as early as the seventeenth century. We shall show in the following quotation from a work published in London in 1763, by Dr. Edward Barry, F.R.S., entitled "*A Treatise on the Three Different Digestions*," that the operation was recommended by Hippocrates, and that it was not infrequently done during the eighteenth century:

"When evident marks," Dr. Barry says, "appear in the Sides, all Authors, antient and modern, agree, that an Aperture should be made; and Books of Observation abound with Instances of this kind, where it has been performed with Success. *Hippocrates** constantly directs it either with the *Knife* or actual *Cautery*, not only where the *external Appearances* are evident, but where they are very *obscure*: and seldom seems to doubt of Success, but in very advanced Cases, where the Fluids in general and the purulent Matter collected are degenerated into a putrid eroding State, and where, though a free Discharge is given, yet the Ulcer can never heal. It appears from the Dissection of those who have died of this Distemper, that such Abscesses or Ulcers in the Lungs generally adhere by a large Surface to the Pleura. . . . By this Adhesion of the Lungs to the Pleura, the Parts affected are kept (as if carefully designed by Nature) in a great Measure in a State of Rest and easily admit an Opening into the Cavity; neither if the Operation fails can it be attended with any great Danger, or much accelerate the Progress of the Distemper."

Passing to the present century, we find that substantially the same method of treatment has not only been proposed, but actually carried into effect, many times during the last fifty years. Ramadge reports several cases in his treatise entitled "*Consumption Curable*" (London, 1836). In one of these he introduced a trocar between the second and third ribs, in a line nearly perpendicular to the left nipple. "I kept," he writes, "the punctured place open for about ten days by the introduction of a small piece of catgut properly secured externally, when, finding that the cavity became so contracted through the encroachment made on it by the pulmonary expansion as to preclude all further escape of air, I withdrew it." Dr. Hastings and Mr. Stork† have also reported one case in which a silver tube was first introduced, and, not answering, an elastic gum catheter was substituted for it; and a Mr. Robinson another. The publication of the former led to some little controversy as to the propriety of the operation, Drs. Herbert‡ and Campbell§ maintaining that no good results could be expected from it. We have also abundant proof that the accidental opening of a phthisical cavity through the chest-walls may not only not cause immediate death, but may occasionally lead to an apparent arrest of the disease. Thus, as a consequence of the application of the actual cautery to the chest in a case reported by M. Bricheateau,§ a pulmonary cavity was opened and emptied of its contents. Fifteen months later the patient succumbed to an attack of pericarditis, when the cavity was found partially obliterated. In Canstatt's *Jahresbericht* for 1843, vol. iii. p. 365, will be found a reference to the *Medical Times*, Nos. 60, 171, and 180, in which a writer under the signature of "*Discipulus*" reports two cases of phthisis, in one of which a cure is said to have been the result of a self-inflicted wound of the neck by a would-be suicide, and in the other followed the spontaneous evacuation of a vomica through the parietes of the chest.

These few extracts and references—and they

might be multiplied without difficulty—prove that the operation of injecting pulmonary cavities through the chest cannot be in any sense considered a novel one, and we believe we shall be able to show that it is not one which is likely to result in good to the patient. In the first place, the presumption in regard to its usefulness is against an operation which, after having enjoyed a brief popularity during at least three or four different periods, has been so utterly forgotten that it has been as many times proposed as entirely new, and is certainly against one in which the opportunities for performing it would be so frequent as they are in this. The quotations|| which we have introduced above demonstrate with sufficient clearness that the lung may in many instances be laid bare and punctured without apparent injury to the patient. We are inclined to think that this is by no means uniformly the case. In one of the cases reported by Dr. Pepper a slight hemorrhage followed the introduction of the aspirator; and the same accident occurred in the operations done by Dr. Mosler and Dr. Hastings. We are, moreover, very strongly convinced of the fallacy of the argument that, because punctured wounds of the lungs in healthy individuals generally do well, their infliction upon consumptives is not likely to be followed by bad results. Niemeyer—we believe (for we quote him at second hand)—goes so far as to say that the inflammation excited by wounds of the lungs usually terminates in phthisis; but, admitting that this distinguished physician may push his conclusions as to the nature and origin of this disease to an unwarrantable length, there are certain differences in the anatomy of the lung in health and disease which ought not to be overlooked. Caseous degeneration is not the only change which is observed in phthisis. There is in addition to this, in most cases, a development of connective tissue, the effect of which will be to enlarge and keep open the wound made by the aspirator or trocar, and thus to allow the escape of the contents of the cavity into the pleural sac whenever this is not prevented by firm adhesion; and that cavities are not always protected by adhesions is shown by the occasional occurrence of pneumothorax from their rupture. Moreover, the opinion that injections may be of service in the treatment of phthisis rests, we think, upon a mistaken therapeutic basis. In certain conditions of the serous membranes these are unquestionably useful by exciting inflammation; but a little reflection will convince any one who has abandoned in whole or in part the theory which makes phthisis the result of tubercular deposit that this is the very last thing to be desired in this disease. The object aimed at in the management of phthisis, and especially in those local cases in which Dr. Pepper thinks the injections are most likely to be useful, is to allay inflammatory action, not to excite it. We therefore are unable to see how they can be productive of any good; on the contrary, if they light up an inflammatory process in the walls of the cavity, this will be very likely to extend to the cir-

* De Affect. S. V.

† London Medical Gazette, 1845.

‡ Lancet, 1845.

§ Valleix, Guide du Médecin Praticien.

|| See also Van Swieten's Commentaries, English translation, 1759, Section 170.

cumjacent tissue, and thus the disease, which may have been previously held in abeyance, be roused into activity.

In conclusion, we have only to add that we never condemn a plan of treatment on purely theoretical grounds, and will gladly adopt the one under consideration if the result of further experiments shall convince us of the incorrectness of the unfavorable opinion we have formed of it. In the mean time, however, we shall remain in full accord with Dr. Hughes Bennett,* who thinks that the result of all operative interference in phthisis has been "what an intelligent consideration of the pathology of the disease might have anticipated,—a uniform failure."

2019 WALNUT STREET.

AN UNNATURAL POSITION OF THE HEAD A CAUSE OF DEATH FROM CHLORO- FORM AND OTHER ANÆSTHETICS.

BY G. W. COPELAND, M.D.,

Boston.

IN the *Boston Medical and Surgical Journal* of February 26, I published a short article on the "Styloid Muscles and Anæsthetics," in which I referred the cause of impeded breathing during anæsthesia to the action of the styloid muscles closing the glottis. I also pointed out how the difficulty could always be relieved without making traction on the tongue, simply by tilting the head forward in a natural position, so as to relax these muscles and permit the patient to breathe through the nose.

It has since occurred to me that many of the deaths which have resulted from the use of anæsthetics may have been due to the imperfect knowledge that has existed regarding this matter. The difficulty experienced in keeping the air-passages free has, ever since the discovery of anæsthetics, been the most troublesome and dangerous complication attending their use. All authorities agree that obstructed or impeded respiration is a symptom attended with great danger to the life of the patient, and always requires prompt and immediate attention.

Waring, in his book on Practical Therapeutics, sums up the experience of the profession with chloroform, in the following observations: "Watch carefully the respiratory movements, and the color of the cheeks, lips, and eyes. Signs of danger: lividity of the face, stertorous respirations, irregular, gasping respirations, feeble pulse, death-like pallor." His directions are, "Stop the chloroform, open the mouth, draw out the tongue, and watch carefully."

When we consider the ways in which deaths occur during anæsthesia, we see that these signs of danger have not been so designated without sufficient reasons.

Gant, in his *Science and Practice of Surgery*, speaks of death from chloroform as follows: "During inhalation, death may occur in three different ways: by asphyxia, by cardiac syncope, or by coma.

"Asphyxia is indicated by the ordinary symp-

oms, lividity and turgescence of the face, violent respiratory efforts, and cessation of the pulse and of the heart's action."

In cardiac syncope "the patient, after a few inspirations, suddenly becomes pale and faint, the pulse beating almost imperceptibly for a few moments, and then ceasing, although the respirations may continue; death taking place by paralysis of the heart."

"Coma presents the same appearance as asphyxia, but without failure of the heart's action; death resulting from congestion of the brain."

In two of these three modes of death we then see that there is impeded breathing and improper aeration of the blood, as evinced by the lividity of the face. The great mistake up to the present time has been in considering the difficulty with the breathing, a symptom arising from the use of anæsthetics or a sign of full anæsthesia, and not a mechanical obstruction of the glottis from an unnatural position of the head.

The *Lancet* of February 1, 1873, contains a report by the editor of a "Case of Fatal Suffocation from Nitrous Oxide Gas," in which a dentist is related as having administered that agent for the purpose of extracting a tooth. He says "it was not till after the operation was completed that anything unusual happened, but immediately afterwards the face became livid, and the 'features,' it is said, 'commenced to 'swell.'" He refers death in this case to asphyxia.

In a case of death from the bichloride of methylene, which occurred at the Charing Cross Hospital in the practice of Mr. Canton, it is stated that "one nostril was closed by the tumor, thus obstructing respiration, and the patient was subjected to the influence of the bichloride in the sitting posture."

In the *Lancet* for September 6, 1873, the editor, in commenting on a death from chloroform which happened in a dentist's chair at Brighton, the post-mortem showing fatty degeneration of the heart, says, "It is one of those cases when death seems to have followed rigidity of muscle, and it is questionable whether asphyxia may not have helped, as it were, the fatal syncope."

It seems to me very plausible that cardiac syncope may be induced by the momentary closure of the larynx depriving the heart of its natural stimulus in patients suffering from shock or fatty degeneration, or already reduced by disease. It is a significant fact that all the deaths from nitrous oxide gas, and a large number of those from other anæsthetics, have taken place while the patients were in a sitting posture, which would allow the head to fall back farther than if they were lying down, thus favoring the theory that interference with the free action of the lungs may have been the primary cause of death. It must be remembered that closure of the glottis may occur without our attention being directed to those struggling efforts on the part of the patient which would happen were voluntary efforts possible, and the first noticeable symptoms of danger may be lividity of face or death-like pallor.

It may not be out of place here to refer to the many deaths from intoxication, apoplexy, and

* Reynolds's System of Medicine, vol. iii. p. 589.

coma from whatever cause, as being in some instances hastened, and perhaps even produced, by interference with the respiratory functions from an unnatural position of the head.

There is one other point to which I wish to allude, and it is the importance of elevating the head sufficiently to compel the patient to inhale the anæsthetic through the nares entirely. If deep inspirations be taken through the open mouth, the lungs are inflated instantaneously and just as rapidly emptied, leaving a long interval without any of the vapor being in the lungs. If the inhalations be through the nares, it takes a much longer time to inflate the lungs and a much longer time to empty them, leaving no interval. Now, the number of respirations per minute is the same either way: it follows that it will require a longer time to effect anæsthesia through the mouth than through the nose.

It appears evident to me that if attention be paid to the position of the head during anæsthesia from any agent, a greater degree of safety will be obtained than has hitherto existed.

NOTES OF SOME SURGICAL CASES.

BY JOHN J. BLACK, M.D.,

New Castle, Delaware.

FEMORAL HERNIA, AT TIMES SIMULATING STRANGULATION, ACCOMPANIED BY A CLINICAL CURIOSITY.

SATURDAY, November 29, 1873, 11 o'clock A.M., I was summoned to see a lady about 60 years of age; she told me she had had a "rupture" in each groin for a number of years. Never had had trouble until this morning, when she was unable to reduce the one on the left side. Had severe umbilical pain, and the tumor was tender. Had worn a double truss "off and on" for a long time. Upon examination, I found a femoral hernia on each side; the right one normal, the left one presenting a tumor, size of a hen's egg, quite tender, and irreducible after the usual manipulation. I then asked my friend Dr. G. T. Maxwell to see the case with me. I again tried manipulation without success. Then we etherized the patient, and were still unsuccessful. We introduced the needle of a hypodermic syringe, and drew off a little serous fluid, but do not think the bulk of the tumor diminished much. We next gave a full opiate, and our patient was comfortable for several hours. Did not vomit. Again the tumor did not yield to manipulation, very carefully performed, yet the symptoms of strangulation were not decided, and we gave her an opiate, and left her until morning. Then I found her with pain about the umbilicus, and vomiting; and then I made up my mind there was strangulation, and I would have to cut down on the tumor and liberate it. But, after giving her numerous draughts of water, the stomach quieted, pain ceased, and the symptoms were no longer urgent, the sickness and bilious vomiting having been caused by the opiate. The tenderness increased in the tumor; redness appeared, showing a tendency to suppurate. This state of affairs continued increasing until December 10 following, when I made carefully a valvular incision and liberated a large amount of pus. Immediately on opening the tumor there was an escape of the foulest-smelling gas. I supposed at the time I had unintentionally opened the bowel; but later disclosures have taught me to believe that the foreign body hereafter to be spoken

of had penetrated the bowel from within outwardly, and caused the suppuration in the cellular tissue of the abdominal walls, external entirely to the bowel. Poultices were applied for several days, rest enjoined, liquid diet, etc.

One morning, about ten days after this, on visiting her, she showed me a piece of bone, about one and a half inches long, which she had extracted from the opening in the tumor. After this the opening soon healed, and up to this time (April 17, 1874) the hernia has appeared to be "radically cured."

Remarks.—My friend Dr. James Tyson, of Philadelphia, kindly presented the bone to Prof. Harrison Allen for examination, and he pronounced it to be not human, but a part of the rib of a robust-chested mammal of small size. Prof. Leidy first thought it a foetal rib, but, after examining it, was satisfied it was not human. I may add here that the patient was a married woman, and had had two children.

This case is interesting, first, as simulating strangulation, which I believe did not occur at any time during its progress; second, the discharge of the foreign body, which must have been swallowed with the food, and have worked its way through the bowel; and third, as exhibiting the hernia as up to date cured by the inflammation developed in the case.

AMPUTATION AT THE SHOULDER-JOINT FOR EXTENSIVE GUNSHOT WOUND OF THE ARM AND SHOULDER.

Friday, October 31, 1873, I was called down the State by Dr. Kemp to see, in company with Drs. Dunlop, Worrell, and Fromberger, a young gentleman, 23 years of age, healthy, and well built, who, the evening before, had, whilst returning from a duck-shooting excursion, shot himself accidentally with a full load of heavy duck-shot through the upper part of the left arm and shoulder. The bone was shattered nearly to the head; soft parts carried away on top of arm and shoulder, and also part of the skin and muscles of the shoulder posteriorly, leaving the arm hanging by the axilla, vessels, and nerves. He was very weak, and had apparently lost much blood before assistance had been rendered him, but, thanks to the attention of the physicians in charge, had commenced to rally, and was not losing blood. At the time of my arrival, of course, there was nothing to do but to take out the arm at the shoulder-joint, which, with the approbation and assistance of the medical gentlemen present, I did, after the method of Larrey, modified somewhat, inasmuch as the soft parts were so much lacerated and destroyed. I was compelled to draw the parts together posteriorly, at right angles to the usual single-line wound left by the operation. The patient passed through the ordeal moderately well. The pulse afterwards was very weak, and he hung between life and death for several days, but finally made a good recovery, thanks to the skilful management of the after-treatment by Dr. Kemp and the gentlemen mentioned, and the kind care of his friends.

Remarks.—This case, at first sight, was certainly a very unpromising one, and I publish it to add it to the statistics of shoulder-joint amputations, and as illustrating what to me has always appeared a fact,—that shoulder-joint amputations are among the most successful, in their final termination, in surgery; and now, when I have occasion to watch the progress of such cases, I always feel highly assured that "le bon temps viendra."

SILK LIGATURES REMAINING UNUSUALLY LONG AFTER AMPUTATIONS.

Some time since, I had occasion to amputate a forearm for gunshot wound. I applied four ligatures. Those on the radial and ulnar arteries remained six months. After some time they became deteriorated and broke off on pulling them. Little abscesses formed, and in about six weeks the knots came away, and left a good stump.

Again, I amputated a boy's leg at the knee-joint, and the main ligature acted in the same way, but came away at the end of three months, and the stump was an admirable one. I suppose the ligatures must have embraced some tendinous substance, together with the artery; and such cases should teach one to be, as I thought I was, careful in applying ligatures.

TRACHEOTOMY FOR SUPPOSED FOREIGN BODY IN THE TRACHEA.

Some time since, a woman came hurriedly into my office with a little girl, about 18 months old, in the last gasps of suffocation, telling me the child had swallowed a groundnut kernel the "wrong way." I immediately opened the trachea in the usual manner, the attempts at respiration being so feeble as to impede me but little. I could find nothing above or below, as far as I could go. All my attempts at artificial respiration, etc., proved ineffectual, the child having died by the time I got the trachea opened. I suppose the nut-kernel slipped into one of the bronchi as the parts became relaxed by death, having been tight enough before to produce suffocation. I could not obtain a post-mortem.

CAUTION AGAINST THE USE OF ETHER NEAR FIRE OR LIGHT.

Some time since, in removing a tumor from a woman's neck, I had occasion to use the actual cautery, and whilst doing so the ether on the towel took fire, and disconcerted for a moment all present, but did no damage except very slightly burning the patient's face. Fortunately, the bottle did not come in contact with the flame. I remember almost serious trouble to have arisen from this accident in this very way in the clinic of a distinguished surgeon. I mention it in order that it may serve its part in this important matter, and keep all on their guard when using ether near fire or light.

[The light should always be *above* the ether, the vapor of which is heavier than air and always falls.—ED. P. M. T.]

SACCHARATED CALOMEL.

BY C. G. POLK, M.D.,

Philadelphia.

IN this age, so fruitful in the invention of means for "killing bodies and saving souls," as Byron tells us, it is useless to be surprised at any innovation that may be brought forward; some of these, however, are supremely ridiculous, and among these is saccharated calomel,—the last new sensation. The uninitiated would infer from our journals that its discovery will materially enlarge the domain of medicine, and prove a panacea for all the ills to which flesh is heir.

About eight years ago, while on duty with the Seventh U. S. Infantry, I had some calomel and sugar rubbed together to facilitate its administration. About a month afterwards my hospital steward administered ten grains of this calomel to a soldier. Burning and intense pain in the stomach, with considerable nausea, followed. I administered albumen,

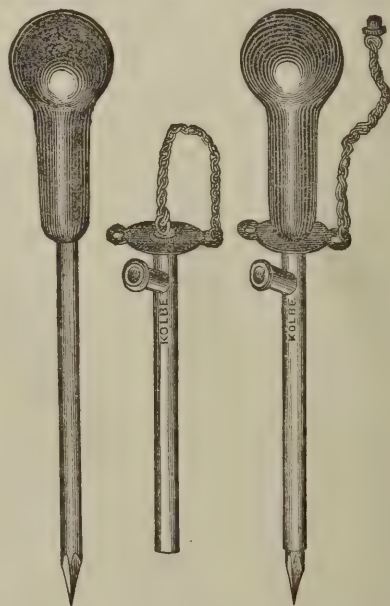
with an emetic, and relieved the poor fellow. On testing the saccharated calomel, I found it contained both calomel and corrosive sublimate. If any one wishes to test this, let him mix the sugar and calomel, let it stand a month or more, mix with water, pour off the water, and add a little milk of lime to it, and the yellow tinge will become obvious, showing the presence of the bichloride. In the case referred to I tested the unmixed calomel, and found it entirely free from the presence of corrosive sublimate. The *Chemical News*, November 1, 1872, says, "G. Vulpius has been examining this subject, and finds that when calomel is mixed in powder with white sugar, or calcined magnesia, or hydrated carbonate of magnesia, or bicarbonate of soda, corrosive sublimate is formed in twenty-four hours. Rather large quantities are formed in powders composed of calomel, white sugar, and bicarbonate of soda."

AN IMPROVED TROCAR.

BY THOMAS G. MORTON, M.D.,

Surgeon to the Pennsylvania Hospital.

IN performing ordinary tapping operations, it frequently occurred to me that the silver canula of the common trocar might be improved by having at its upper extremity a short additional silver tube, upon which rubber tubing of any length could be attached. Mr. Kolbe made for me, nearly a year ago, the instrument shown in the adjoining cut, which I have, with others, used with great



satisfaction. After the trocar has been withdrawn, the metal plug, which is attached to the chain, is introduced into and accurately closes the end of the canula; the fluid is thus directed through the shorter tube, and conveyed away by rubber tubing.

In hydroceles, ovarian and abdominal dropsies, this addition to the common trocar has been found very satisfactory, especially in those cases where the

patient cannot be placed in the usual position for tapping, while the bed and surroundings of the patient, so liable to be soiled in using the ordinary trocar, can be with this instrument entirely protected during the removal of the fluid.

NOTES OF HOSPITAL PRACTICE.

BELLEVUE HOSPITAL, NEW YORK.

Reported by F. W. CHAPIN, M.D.

A CASE OF STRANGULATED HERNIA.

A. S.; 47; male; U.S.; carman; admitted August 18, 1873. Patient has always been healthy, and moderately temperate. Four years ago he became aware of the existence of a hernia on the left side. The tumor was of about the size of a walnut, but has since increased to the size of an orange.

About 6 P.M. yesterday he broke his truss, but continued to work, lifting heavy iron rods. The hernia came down, and increased very rapidly in size. He attempted to reduce it himself several times. During the night he occasionally experienced slight pains in the abdomen, but did not vomit.

This morning a physician tried in vain for half an hour to reduce the hernia.

On admission, 1.30 P.M., he states that he has eaten almost nothing since last night; that since morning he has had some nausea, with increased abdominal pain; that he has not vomited, and that his bowels have not been moved for two days. His general condition on admission is good; pulse 80, regular and full. Tumor measures $13\frac{1}{2}$ inches from the peno-scrotal junction to the internal ring, and $12\frac{1}{2}$ inches transversely at its broadest part. He was put in bed; foot of bed elevated; ice placed over the tumor. This treatment was continued till 3.30 P.M., when the tumor was aspirated, once at the lower part, and again in the middle. No fluid was obtained. At 3.40, and again at 5 P.M., taxis was tried unsuccessfully. The patient was then etherized, and an incision made over the middle of the tumor from the point opposite the internal abdominal ring to the peno-scrotal junction. The layers were carefully divided on a director until a gush of a considerable quantity of sanguinolent serum indicated the opening of the sac, which was then slit up. A layer of omentum was exposed, of dark color, thickened, and exhibiting on its surface numerous turgid veins. This being laid back, a loop of intestine, nine or ten inches in length, was seen; normal in color, odor, and feel. Just beneath the intestine was a recent clot of blood, of about the size of a small hen's-egg. The constriction was found at the external ring, and divided. The internal ring was large, and had been dragged down so that the two were nearly opposite each other. Adhesions were discovered between the under surface of the intestine and the hernial sac, preventing the reduction of the former. These were divided, partly with the knife, and partly by tearing. Several small vessels which bled quite freely were closed by torsion, and one was tied with silver wire, the ends being cut short, and the remainder subsequently returned into the cavity of the abdomen with the gut. The omentum was tied with five silk ligatures, and the hernial portion then cut off. This portion was as large as an ordinary man's hand. The ligatures being firmly held, the omental stump was allowed to pass back into the abdominal cavity, and after further manipulation the intestine was also returned. The ligatures were brought out at the upper

end of the wound, and the latter, after excision of a portion of the sac, was closed with wire sutures. A compress of lint was then firmly bandaged over the inguinal canal. The operation had lasted about an hour. Pulse at the close was 96, regular, and somewhat compressible. Respiration 20; temperature 99° .

9 P.M.—Patient rallied well from the ether; is now quiet and comfortable. Has very little pain in the region of the wound; none elsewhere. Was given hypodermic of Magendie $\mathbb{M}x$ at 7 P.M., and another at 8.30 P.M.; pulse 88, respiration 16, temperature 100° .

August 11.—Pulse 88, respiration 16, temperature 100° . Patient had $\mathbb{M}x$ of Magendie again at 12 M. last night, after which he slept well. This morning he says he feels well; has slight pain across the abdomen; no tenderness. Tongue slightly coated. Pupils contracted. He has not vomited since the operation.

10 P.M.—Patient has vomited two or three times after taking food. He has been kept under the influence of opium all the time. Pulse 120, respiration 16, temperature 102° . Slight pain and tenderness in abdomen, with marked tympanites.

August 12, 9 A.M.—Pulse 98, respiration 18, temperature 100° . Patient vomits a good deal; the vomited matter is bitter. Ordered

R Acid. hydrocyan. dil.,
Spts. chloroformi, $\mathbb{a}\mathbb{a}$ $\mathbb{M}xvj$;
Aq. calcis, $\mathbb{z}ij$.—M.

Sig.— $\mathbb{z}i$ q. 2 h.

5 P.M.—Pulse 84, respiration 26, temperature $100\frac{1}{2}^{\circ}$. Some tympanites and tenderness. No vomiting since morning. Patient continues to take morphine quite freely. Nourishment is given frequently in liquid form.

August 13, 8 A.M.—Pulse 84, respiration 16, temperature $100\frac{1}{2}^{\circ}$. Patient feels well; no pain; slight tenderness and tympanites of abdomen; no vomiting. Takes nourishment readily,—beef-tea and egg-nog, $\mathbb{z}ii$ q. 2 h., alternating. Dressings removed from wound. Scrotum but little swollen. Union exists in wound except at upper part, where the ligatures protrude, and about an inch at the lowest part. There is slight suppuration at each of these points. Pad over inguinal canal reapplied; scrotum supported by a band of adhesive plaster passing under it from one thigh to the other. Treatment by morphine and liquids continued.

7.30 P.M.—Pulse 92, respiration 18, temperature 102° . Patient has delusions; answers questions rationally.

August 14, 9 A.M.—Pulse 86, respiration 20, temperature $98\frac{3}{4}^{\circ}$. Delusions continue; patient feels well; no pain; no vomiting; some abdominal tympanites; some tenderness at lower part of abdomen, most marked on the left side on deep pressure. Scrotum slightly swollen and oedematous. Stitches removed from wound; union throughout, except where the ligatures protrude. No pus collected in scrotum. Morphine and liquid food continued.

4 P.M.—Pulse 86, respiration 20, temperature $99\frac{1}{2}^{\circ}$. Delusions and hallucinations continue; patient gets out of bed unless watched closely.

August 15, 9 A.M.—Pulse 88, respiration 22, temperature $98\frac{1}{2}^{\circ}$. 5 P.M.—Pulse 96, respiration 28, temperature $99\frac{1}{2}^{\circ}$.

Patient is delirious; is sweating profusely; has marked muscular tremor. Friends state that he had been drinking hard for a long time previous to admission.

August 16, 9 A.M.—Pulse 112, respiration 30, temperature $100\frac{3}{4}^{\circ}$. Patient still delirious; constantly talking and struggling. Tongue dry and coated brown; teeth covered with sordes. He complains of thirst. Wound looks well; swelling of scrotum diminished. Patient had a copious discharge from the bowels this morning. No abdominal pain. Very little tympanites. No ten-

derness except near the wound. Ordered nourishment to be continued as usual, with \mathfrak{z} ss of brandy q. 2 h.

5 P.M.—Pulse 100, respiration 24, temperature $100\frac{1}{2}^{\circ}$. Patient had another passage from the bowels; is still delirious. Ordered pot. brom., gr. lx; cum chloral hydrat., gr. xx; to be repeated in four hours if sleep should not ensue.

August 17, 9 A.M.—Pulse 100, respiration 24, temperature $99\frac{1}{2}^{\circ}$. Bromide and chloral were given at 7 and 11 P.M., yesterday, and patient slept well all night. P.M.—Pulse 88, respiration 26, temperature $99\frac{1}{2}^{\circ}$.

Patient has been quiet, though slightly delirious, all day; has no abdominal pain or tympanites; is allowed to take solid food.

August 18, 9 A.M.—Patient is quiet and more rational; slept well all night. Tongue moist and thinly coated. Bowels moved last night. Slight suppuration at the point of exit of the ligatures; elsewhere union is firm. From this time the patient progressed satisfactorily.

The first omental ligature came away on August 29, and the last one was removed on September 10. On October 10 the patient was discharged and told to wear a truss, although there were no signs of a hernia.

This case presented some instructive features. The hernia was a large one, the sac containing both intestine and omentum,—a large piece of each. It was the omentum which suffered chiefly from the strangulation. And this was a fortunate circumstance; for, had the intestine suffered equally, the case would certainly have been a hopeless one. A large piece of omentum covered the gut, forming a sort of cushion for it at the seat of constriction, and thus preventing its complete strangulation by the firm, sharp, and unyielding boundaries of the external ring, until surgical interference gave relief. The omentum was found to be on the verge of sloughing. The intestine beneath it was "normal in color, odor, and feel."

Had the space occupied by the omentum been filled by intestine, it is plain that some portion of the latter would have suffered as the omentum did. The prognosis, as it was, however, was necessarily doubtful; for it was almost impossible to do no harm to the intestine while tearing and cutting it away from the sac, to which it was bound by firm adhesions. And again, the returning of so large a stump of omentum ligated in five sections, each ligature embracing a considerable amount of tissue, was a doubtful, though unavoidable, experiment. It was a month before the omental ligatures had all come away.

In spite of the drawbacks already mentioned, and of a severe attack of delirium tremens, the patient, *whose gut had been but little injured*, made a most satisfactory recovery.

THERAPEUTIC NOTES.

NEW MODE OF ADMINISTERING IODINE.—A combination of iodine with some organic substance of such a nature as to allow, by its decomposition in the economy, the liberation of this element, has long been a desideratum.

Such a combination M. Collas thinks he has found in iodized albumen, which combines ease of administration with certainty in composition. The presence of iodine in this compound cannot be distinguished until after the destruction of the organic matter. Iodized albumen is prepared by shaking briskly together a solution of albumen with iodine, in very fine powder, or in solution in an appropriate vehicle. The mixture, at first dark brown, becomes decolorized after some hours of contact, and no longer gives a violet color with

starch. The product is then dried at a gentle heat and made into pill form, divided in such a manner that each pill shall contain three-fourths of a grain of iodine.

DIGITALIS IN PUERPERAL CASES.—Dr. Winkel, who has made various experiments with the different preparations of digitalis, does not hold it to be a specific in puerperal fever, but administers it as a prophylactic against the phlegmonous process. Where disturbance of the digestion results, he discontinues its use. Dr. W. found the hypodermic use of digitalin dissolved in equal parts of alcohol and water, in the proportion of .001 gramme of digitalin in 3 grammes of fluid, to be the best method of administration. The mean requisite dose is .005 gramme. The advantage of this preparation is found in the smallness of the dose and the ease with which its action may be regulated. The effect follows in one to three days generally, a simultaneous sinking of temperature and pulse being observable. Elimination cannot be absolutely stated to take place through any organ. Digitalin appears to act upon the brain, producing rest, better sleep, and enlargement of the pupil. It appears also to act as a styptic, recommending itself in this respect after severe hemorrhage.

The question as to the tolerance by puerperal women of large doses cannot as yet be answered, the assertion of its only partial absorption through the altered condition of the intestine being unsupported by proof. The favorable action of digitalis is attributed by Dr. W. to its effect upon the circulation; for, as in the chills of the puerperal condition the prognosis is more favorable when the pulse is not over 100, it is evident that a remedy which will prevent such increase must be beneficial. The observation of after-pains following the continued use of digitalis, together with its styptic action, has given rise to the conjecture that its effect is upon the unstripped muscular fibres of the uterus. By its contraction of the capillaries it prevents exudation of the colorless blood-corpuscles.

PICRATE OF AMMONIA IN INTERMITTENT FEVERS.—Dr. Beaumetz, who some time previously had urged the use of this remedy before the Société de Thérapeutique, again mentioned at a recent meeting the success which he had attained by its administration in the treatment of rebellious intermittents after the entire failure of sulphate of quinine. In his hands it had failed but once, while its success in many other instances was remarkable. Two-thirds of a grain daily is said to be sufficient.

JABORANDI—A NEW SUDORIFIC AND SIALAGOGUE.—Dr. Coutinho, of Pernambuco, has introduced to the notice of the profession a plant hitherto known only in Brazil. According to the testimony of Dr. Rabuteau, this plant possesses the most decided diaphoretic qualities, and, in addition, acts as a powerful sialagogue. An infusion of fifty grains of the powdered leaf in about six ounces of water, although partaken of when cold, produced within three-quarters of an hour profuse sweating, accompanied by free salivation.

M. JACQUES DE MAY, a Parisian pharmacist, has devised an ingenious method of applying various ointments with accuracy to such semi-cavities as the conjunctiva, etc. The ointment, which should be mixed with twenty per cent. of oil to insure fluidity, is simply placed in a flexible tube of tin, such as is used by painters for moist colors. By this means it is kept from contact with the air, and may be squeezed out in a vermicular cylinder and directed accurately and in measured quantity just where it is wanted.

HYPODERMIC USE OF ERGOTIN.—M. Drasche, Rudolf Hospital, Vienna, uses the following hypodermically: ergotin, five grains, in a fluidrachm of glycerin; dose, twelve minims.

PHILADELPHIA
MEDICAL TIMES.
 A WEEKLY JOURNAL OF
 MEDICAL AND SURGICAL SCIENCE.

The Philadelphia Medical Times is an independent journal, devoted to no ends or interests whatever but those common to all who cultivate the science of medicine. Its columns are open to all those who wish to express their views on any subject coming within its legitimate sphere.

We invite contributions, reports of cases, notes and queries, medical news, and whatever may tend to increase the value of our pages.

All communications must bear the name of the sender (whether the name is to be published or not), and should be addressed to Editor Philadelphia Medical Times, care of the Publishers.

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SATURDAY, MAY 30, 1874.

EDITORIAL.

THE AMERICAN MEDICAL ASSOCIATION.

AS our readers are aware, in a very short time the American Medical Association meets. Already have editorial quills been busy with the coming event, and the annual rain upon the much-abused Association has set in. The most unkindest cut of all is, to our thinking, a recent editorial in one of our New York cotemporaries, in which the virtuous, though sleepy, critic upbraids the Association for not doing last year that which it did do, and acutely argues for the adoption at the next session of certain organic laws, which were really acted on and passed at the St. Louis meeting. We are rejoiced to find that Philadelphia does not have a monopoly of Rip Van Winkles, and to learn that the whirling metropolitan maelstrom has one corner in which it is possible to enjoy a year's nap.

The journal referred to advises most strongly that a committee be appointed to consider ethical questions. In truth, such a committee was chosen, under the name of "Council," and, as any one can see by looking over the printed Transactions, has met and entered upon the revision of the Code of Ethics.

The relief afforded by this Council, we believe, will be very great. The bad repute of the Association is very largely due to the disputes to which questions of ethics have given rise; indeed, the ethical disorder has been so violent as to threaten dissolution. We trust the remedy will be found sufficient, and that the waste of time in unseemly quarrels will occur no more. This much accom-

plished, does anything more remain to be done, and is it possible to have an association which shall represent the profession of the United States as the British Association does that of Great Britain? Answering the last of these questions first, we are inclined to say "No."

There are certain geographical or physical laws which it seems to us must prevent our Association from attaining the position held by the English body; chief among these is the great extent of the country. In England, let the Association meet almost anywhere, the bulk of the practitioners in the kingdom can go to it by some early morning train, and return the same night; but here, to attend the meetings is a work of days, and sometimes of weeks, and the expense is commensurate with the time consumed. As the Association usually gathers in a fairly busy month, it is unreasonable to expect a large proportion of the most active practitioners to attend its sessions. If the meetings were arranged for August, and were held in some cool northern position, it is possible the attendance would be more representative of the best and busiest section of the profession.

The great size of our country also lessens the attractiveness of our Association to individuals. Sir William this or that goes to the British Medical because he meets those who either call him in consultation, or who he hopes will do so; for all England is his field of practice. Leading practitioners here may find it their interest to attend State medical conventions; but who expects to be sent for in consultation one or two thousand miles? Evidently, the most powerful of motives—self-interest—draws the professional leaders much more strongly in England than it does with us.

Be these things as they may, we are of those who believe in the necessity of some central organization, which shall, as far as possible, represent the profession in the United States, and we intend, therefore, to sustain the American Medical Association as much as we are able. Free discussion is the only way to arrive at the truth, and it behooves every medical man to ask himself, what can be done to build up the central society? The ethical troubles having been settled, the next point evidently is to get as high a class of delegates as possible. To secure this, a motion was offered at the last session, and is to be acted upon at the Detroit meeting, confining representation to such County and District Medical Societies as are recognized by their respective State organizations, and to the army and navy. The chief object of the resolution is to cut off the colleges; and we think this is a good move; yet it appears

that it would be better to allow representation of such educational institutions as really require a three years' course of study. The only school in the country that could claim a position would be Harvard, and the by-law would be a standing protest against the present educational Cheap John system so degrading to the profession. The proposed by-law certainly needs some alteration in language, if, as appears to us, it cuts off such medical bodies as our College of Physicians and the New York Academy of Medicine, to say nothing of pathological and other lesser societies. In Philadelphia a very large proportion of the best men of the profession belong to the College and do not belong to the County Medical Society; so that, as far as concerns this city, the proposed amendment would be simply suicidal.

A matter upon which no action has been taken, that we are aware of, is the Transactions. Of these, twenty-four volumes have been published; and on referring to vol. xxiii. we find the expense for that year was fourteen hundred dollars. Estimating the annual outgo as one thousand, we get a total of twenty-four thousand dollars; spent in what? Simply in disgracing the American profession before the world. A grain of wheat here and there, to be sure, but mainly chaff, chaff, chaff, fit only to be burnt up by unquenchable fire. Let us do away with the Publication Committee altogether—put an end to that body, whose organic type does not rise as high as that of the amphioxus, the lowest of the vertebrata, in that it is not even furnished with a *chorda dorsalis*. The Association may rely upon it that anything worthy of preservation occurring at its sessions will be embalmed by the journals, and that it would be a general relief if the Transactions were confined to the business minutes. A thousand dollars a year, properly expended, would be a godsend to American medical science. What we most need is original investigations. Let two prizes of five hundred dollars each be offered, and *not given unless earned*, and we conceive the result would be most happy. In a recent article upon "Universities: Actual and Ideal," Prof. Huxley says,—

"The other day an emphatic friend of mine committed himself to the opinion that, in England, it is better for a man's worldly prospects to be a drunkard than to be smitten with the divine dipsomania of the original investigator. I am inclined to think he was not far wrong. And be it observed that the question is not whether such a man will be able to make as much out of his abilities as his brother, of like ability, who goes into law, or engineering, or commerce; it is not a question of 'maintaining a due number of saddle-

horses,' as George Eliot somewhere puts it; it is a question of living or starving."

What is true of England is a hundred times more true of America. With as much of talent, we firmly believe, as any other country in the world, we do not accomplish as much of original investigation as a third-rate German town; largely because we systematically starve out, or indifferently freeze with neglect, such talent. To be sure, our lordly association offers the magnificent sum of one hundred dollars as a prize. No wonder it gets prize essays which the medical journals would scarcely print.

We acknowledge that five hundred dollars is too small a sum for the Association to offer as an inducement to original investigation; but let us not despise the day of small things, and as it is probable that at first the country could not produce more than one essay worthy of the prize, a fund might be obtained for increasing the amount.

CORRESPONDENCE.

SLOWTOWN, May 15, 1874.

SIR,—I have read with indignation which I do not care to conceal the recent shameless attack upon the Board of Trustees in this city. Exhausted by the cares and trials of the recent election to which your correspondent alluded, I fled to a distant watering-place to recruit my conscience and my shattered constitution, and there in a reckless morning journal I read the cruel and covert attack upon the body to which I am proud to say I belong.

It is impossible to leave unanswered the charges thus made, and when I assure you that in no instance did more than one hundred and thirty-two persons call upon me for any single candidate, that the board in question contains no grandmothers, that your definition of canvass exists in no dictionary, that the cost of our broken-door bills is provided for by a fund left to the college ages ago by a successful candidate, I trust you will be satisfied.

Perhaps you would like to know how we do really secure a good choice. In the first place, we ascertain who among the candidates lectures best. This we get at by asking their office-students. If a man lectures well, we drop him at once, since it is our policy to train our own professors, and what would be the use of training a man who can already lecture? If, too, we find out that a man has written essays which are valued and quoted in Europe, we put him aside, because it is impossible that any one abroad can know as much about a doctor as we do. In this way we manage to eliminate until we have left some one who having a minimum of past reputation will be sure to work hard in order to acquire a future name. In other words, we go in for expectation. We thus make sure

that our professors shall be active working men, with a reputation to make, not an effete people who have worn out their brains in past efforts. Our men are to be taken on trust; and this is the real meaning of the word, —a trustee being a fellow who elects a fellow whose future is to be taken on trust by other fellows in general.

Yours, etc.,

AN INDIGNANT TRUSTEE.

PHILADELPHIA, May 10, 1874.

DEAR SIR,—Many years ago I had the grim misfortune to become a candidate for a vacant chair in this city, and I beg to assure you that the fun of *Lancet's* letter from Slowtown but faintly describes the reality. Consultations of my friends were held as to every trustee—twenty-four, I think. Who were their clergymen, doctors, creditors, relatives? What church influence reached them? Which of them were believed to listen to advice from their wives, and who were their wives' clergymen? and so on. Who was to be pushed steadily? who not? Who needed somebody else "on him"? I assure you, sir, I look back with loathing on that time; and yet no man who has tried this vile path to preferment can say I overdraw the picture. Some one may answer, Why do physicians resort to such devices? Why not send to the individual trustees a list of the papers you have written, invite them to hear you lecture, or give them the written opinion of half a dozen men of note as M.D.'s concerning capacity to teach? Ask them to write, as they should do, to the dozen or so of men in your own line throughout the country who can say with authority of what force you are in the pursuit you profess to have excelled in, and then leave to them the freedom of a thus instructed choice.

Does any man who reads this presume that such a course would prevail against the grandmothers, church influence, insurance-board associations, this or that railroad? I for my part see no hope save one. The time will come here, as it has come in New York, when the faculties will possess the true power to elect, or at least to nominate; when they will have representation in boards of trustees, and when the alumni will insist upon a like privilege; then may we expect to see mercantile and other considerations which are called "influence" yielding to an honest judging of the candidates by the mode in which they have illustrated their branch, and by the known measure of their capacity to excite their own enthusiasm for its pursuit in those whom they teach.

Faculty representation.

Alumni representation.

These are what we want in our boards of trustees.

My remarks are called out by unwholesome memories of a past canvass, in which I did not get off with triumph, nor has what I have urged been meant to have the least reference to any contest which has taken place of late. The concours and the German system of promotion have alike their faults, but in the con-

cours it is at least impossible for the worst man to be chosen, while under the German plan he who does not justify his elevation to a lower class of chairs is little likely to rise to a higher one. Work of some kind—original productiveness—is there the test, and is, in fact, a good, if not a perfect one.

Yours,

MAT. MED.

PROCEEDINGS OF SOCIETIES.

BIOLOGICAL AND MICROSCOPICAL SECTION OF THE ACADEMY OF NATURAL SCIENCES.

MAY 4, 1874.

DIRECTOR W. S. W. RUSCHENBERGER, M.D., in the chair.

DR. JAMES TYSON exhibited a beautiful case of one hundred microscopical specimens in pathological anatomy, prepared by Dr. Otto Barth, of Leipsic, which he had recently purchased. He remarked that while he had found some of the sections so thick as to be almost worthless, the majority were thin enough to display structure quite satisfactorily with moderate powers such as 200 diameters. The preparations comprised illustrations of a great variety of diseased organs, and among the rest he would call particular attention to those illustrating the pathology of croupous and catarrhal pneumonia, tubercle, and the different forms of renal disease, including the fatty kidney, the granular kidney, interstitial nephritis, and the lardaceous or amyloid kidney, showing casts, apparently of the lardaceous material, blocking up the tubules. This latter example was important on account of its bearing upon the question as to whether lardaceous disease could be diagnosed by the appearance of casts, which he considered quite possible in some instances, although he had himself never been able to obtain the red reaction of iodine in so-called waxy casts, as found in the urine.

Dr. JOSEPH G. RICHARDSON remarked that he had likewise experimented very often upon the reaction of iodine with the tube-casts of amyloid disease of the kidney, and had in three separate cases been able to obtain the characteristic mahogany-red tint with iodine, acting upon the wax-like casts. In two of these cases he had made the diagnosis of amyloid form of nephritic disorder in patients in the Pennsylvania Hospital, and had the correctness of the opinion fully confirmed by subsequent post-mortem examination. In a recent instance he had been fortunate enough to meet with a small waxy cast, enclosed in a larger one of the ordinary pale, granular variety, and found it, of course, an excellent opportunity for demonstrating the dark-red tint of the iodized amyloid material, as contrasted with that pale-yellow hue given to most animal matters by tincture of iodine, and which Dr. Grainger Stewart states he has never seen exceeded in tube-casts.

Dr. TYSON said he had demonstrated to his satisfaction the futility of testing this reaction with alcoholic solution of iodine, which produced a granular precipitate of albumen throughout the fluid, and completely obscured the field of view.

Dr. RICHARDSON desired to correct his statement by adding that he used in these experiments not the tincture of iodine (mentioned inadvertently), but a diluted solution of the liq. iodini comp., U. S. P.

Dr. J. GIBBONS HUNT inquired how these preparations of Dr. Barth were hardened for cutting the sections.

Dr. TYSON said that he had no definite information respecting these particular specimens, but thought from what he knew of German methods of work that they were probably hardened for cutting in solution of bichromate of potassium or of chromic acid. From an accident which had occurred to one of the preparations, resulting in the fracture of its thin glass cover, he was led to conclude that they were cleared with oil of cloves and mounted in balsam.

Dr. HUNT remarked that when he had first seen the preparations of Dr. Barth, he thought they were reasonably respectable; but on closer examination he had found the cellular elements of the structures shrunken and altered, until, like too many of our own mounted specimens, they came to look merely like caricatures of the tissues, from which they were actually prepared by a process of distortion. All the productions of Dr. Barth which he had carefully inspected were, he believed, hardened in alcohol, by the imperfect method now used in the Army Medical Museum at Washington. According to his own experiments, structures which have been judiciously hardened in chromic acid solutions, and properly stained, especially with hæmatoxylin, exhibited all their cell-elements with admirable distinctness. So superior were the chromic acid solutions, that he could easily demonstrate in a portion of spinal cord, suitably hardened in Müller's fluid, not only every minute blood-vessel, but even the red blood-corpuscles which they enclosed. In proof of these statements he had brought with him to the meeting a section of kidney hardened as above suggested, and stained with perchloride of tin, which exhibited the cells lining the convoluted tubules, the straight tubules of Henle, and even the delicate cell-layer seated upon the inside of the capsule of the Malpighian bodies, as he had never before seen it demonstrated.

Dr. TYSON quite agreed with Dr. Hunt in his unfavorable estimate of alcohol as a menstruum for hardening tissues, and had, some time since, concluded to abandon its use for that purpose. He wished to know whether Dr. Hunt had not been able to bring into view the endothelium of Bowman's capsule by means of nitrate of silver.

Dr. HUNT replied that the silver method enabled us to demonstrate these cells without much difficulty, but at the same time less satisfactorily than the one he had proposed. If delicate cell-elements are properly stained they can be with ease perfectly preserved in balsam, whilst it is only by superior skill in manipulation that thin sections can be prepared and mounted permanently in glycerin.

Dr. TYSON remarked that when in London, two years since, he had had an opportunity of examining some of the glycerin-preparations of Dr. Lionel Beale, and found them just as figured in his various works. They were not, however, sections, and he could not understand how sections could be made of preparations which had only been treated with glycerin, because in it there is no hardening power, and no chance is afforded for the production of any but teased-out specimens. He desired to ask Dr. Hunt what his experience had been in the preparation of specimens by freezing.

Dr. HUNT replied that the method by freezing did not involve any more trouble, but had the disadvantage of requiring special and, for its most successful practice, somewhat complicated apparatus. He considered it very important that the action of the frigorific mixture should be stopped short at the point of waxy hardening, and not allowed to proceed until the stage of completely brittle congelation is reached.

Dr. RICHARDSON exhibited a specimen of leucocythæmic blood preserved in a perfectly sweet condition by mixture with an equal bulk of hydrate of chloral

solution (3j to fʒi), and mentioned as a peculiarity of the case of leucocythæmia the rapidity of increase of the white blood-corpuscles, their ratio to the red disks being as 1 to 2 ten days before the patient's death, whilst after dissolution it was found to be as 2 to 3.

REVIEWS AND BOOK NOTICES.

TREATMENT OF NERVOUS AND RHEUMATIC AFFECTIONS BY STATIC ELECTRICITY. By Dr. A. ARTHIUS. Translated from the French by J. H. ETHERIDGE, M.D., Professor of General Therapeutics, Rush Medical College, Chicago.

Who Dr. Arthius is we do not know, and, if we may judge from the preface of the translator, the American godfather does not appear to have any more definite idea as to the father of his adopted child, for he states that the original treatise was handed him by a friend, who received it from a friend who had been a patient of Dr. Arthius.

If any one of whose truthfulness we had not the clearest knowledge should say to us that he had cured, by a few applications of electricity, epilepsy which had lasted for twelve years, and at the same time restored a right arm that was withered and powerless, we would gaze on him "with a smile that was childlike and bland." Precisely this is what is claimed in the brochure before us; and can we be blamed that the famous witticism which tradition attributes to Dr. Rush has been uppermost in our mind?—"The French lie, and Dr. ——— relies on them."

The tone of the book seems to us to indicate that it has been written rather for the laity than the profession; rather to be handed to the seeker after health in the office, than for sale to doctors.

There are several points of interest in the book; chief among them is the so-called "fluidique bath," by which is meant placing the patient upon an insulating stool, and connecting him with the prime conductor of an electric machine; of this marvellous bath it is written that "the fluidique bath induces an acceleration of the pulse, and is singularly calmant, eases the respiration, develops animal heat, augments cutaneous transpiration, makes more active the urinary secretion, disperses nervous irritation, gives tone to the whole organism, increases the vital forces, and augments the energy of absorption," which is altogether too glibly said to induce us to believe that it was in any way proven by rigorous experimentation.

The most extraordinary statements are made by Dr. Arthius in regard to the diagnostic use of static electricity. We are told that when a person is charged by means of the electric bath, and the hand or a metallic conductor passed over the body, the moment a diseased part is reached it will at once be perceived by both patient and doctor. Hence we can search for disease as the peasant searches for water with his witch-hazel.

Other marvels are told of in this book of Aladdin's lamp; metals are said to be carried into the system by this wondrous static electricity, and the powers of medicines to be increased manifold times. The entertaining character of the book is not lessened by some ludicrous wordings, for which, it may be, we have to thank the translator. Thus, Dr. Arthius speaks to a patient of electricity generated by piles, and hence of hemorrhoidal nature, we suppose.

In taking leave of the brochure, we cannot but express a wish that what it says were true; as, were it so, new diagnostic and therapeutic powers of great value would be in our grasp.

GLEANINGS FROM OUR EXCHANGES.

SUB-CORACOID DISLOCATION OF THE SHOULDER WITH FRACTURE AND ANCHYLOSIS (*The Irish Hospital Gazette*, May 1, 1874).—At a meeting of the Dublin Pathological Society Prof. Bennett presented the right scapula and humerus, taken from a dissecting-room male subject, which presented some unique features. There was no life history. The muscles situated around the shoulder-joint were wasted, but not in a state of advanced degeneration; therefore the accident which caused the anchylosis could not have occurred very long before death. On examining for the cause of the anchylosis, a sub-coracoid dislocation of the shoulder, with a fracture of the upper part of the humerus, was detected. Of this variety of fracture, said Prof. Bennett, only eight examples were recorded by Malgaigne. An example was also recorded in Anger's *Traité Iconographique des Maladies Chirurgicales*, in which, however, the right humerus was depicted with the left scapula; this specimen might consequently be legitimately excluded as being a made-up case. The fracture in these instances passed through the anatomical neck of the bone, then through the bicipital groove, and involved two or three inches of the shaft of the humerus. It is an oblique fracture, and generally spares the great tuberosity. In the present specimen the tendon of the biceps was included in the callus of union. Prof. Bennett observed that his case was unique, as he was not aware of any other of this form of dislocation and fracture of the humerus that had been followed by anchylosis.

SIMULATED DISEASE (*The Lancet*, April 4, 1874).—Messrs. Davidson and Puzey report a case of feigned hemiplegia, and conclude that, in investigating the symptoms of motor paralysis, the following tests are available:

1. The well-known appearance of dragging in a paralyzed leg; 2, the test suggested by Dr. Hughlings Jackson:—in real hemiplegia the paralyzed arm falls forward when the patient stoops; in a case of feigning, the arm will probably be retained by the side; 3, the condition of the muscles in long-continued paralysis:—where paralysis has continued for several months in a limb, we should expect that the muscles would both diminish in size and lose their electro-contraction; 4, in cases where the patient says that he has been confined to bed for many weeks, the condition of the soles of his feet may be taken as a test of the correctness of this statement. A scaly and cracked condition of the cuticle of the soles will, according to our experience, be invariably found in adults (at least in the lower ranks of life) who have been confined to bed for a considerable time.

In all cases of suspected feigning of disease we should endeavor to ascertain whether the patient has had opportunities of becoming acquainted with the symptoms of the disease supposed to be simulated.

ELEPHANTIASIS GRÆCORUM.—Dr. Leisrink relates a case of this kind in the *Deutsche Zeit.*, vol. iv., in which he tied the femoral artery just below Poupart's ligament. The lady, 51 years old, had suffered twenty-five years before from repeated attacks of erysipelas in the right leg, and the latter measured twenty inches round the calf, whilst the sound leg measured only seven. She was considerably weakened by oozing of serum, and four days after the operation the size was reduced to twelve inches. It rose a little afterwards, and, although the patient was not actually cured, the disease was certainly arrested and modified. Compression of the artery has been tried in this and other countries with varying success, but amputation has almost always proved fatal.—*London Lancet*.

ACUTE SOFTENING OF SPINAL CORD (*The Lancet*, March 28, 1874).—A girl, æt. 11, who had always enjoyed perfect health, was seized with shiverings and pain in the limbs, and, four days later, suddenly lost the use of her legs. Paralysis of motion was complete; sensation was diminished in the right leg, and was absent in the left. There was no reflex action. The condition grew worse; the arms became involved, and at the end of a week she died. At the post-mortem examination a quantity of serous fluid was found in the spinal arachnoid sac, and the cervical portion of the cord was soft and disintegrated.

GUNSHOT WOUND OF HEART (*Indian Medical Gazette*, 1874).—A tiger was shot with a rifle from a distance of about four feet. He ran a distance of about one hundred and forty feet, and then died. It was found that the ball had struck him about an inch to the right of the spine, passed through the right lung, struck the heart in the septum ventriculare, below the right auricle, and torn a huge hole through the right ventricle, besides opening the left into the right. It had then grazed the left lung and emerged below, an inch and a half to the left of the mesial line.

SUDDEN DEATH AFTER WOUND OF A FINGER (*Gazette des Hôpitaux—Clinic*, March 7, 1874).—A man was wounded at the extremity of an ungual phalanx by a hatchet. The wound was dressed by a simple bandage. Progress was favorable. The wound began to cicatrize, with very little suppuration. There was no fever, or even malaise, and the patient was soon able to work about the hospital. Suddenly, as he rose from his bed one day, he fell to the floor dead. A careful autopsy revealed evidence of intense bronchitis, and eight or ten abscesses in the liver.

TREATMENT OF TÆNIA (*The Medical Press and Circular*, March 25, 1874).—Dr. Bill recommends the use of phenic acid in the treatment of this worm, and gives an illustrated case where koussou, male fern, turpentine, and other remedies were useless. He gave six grains of phenic acid in half a pint of water four times a day; in two days segments of the worm were discharged. He then gave the acid in shape of pill, and on the third day the remainder and head of the animal were discharged.

TREATMENT OF ALCOHOLISM BY NUX VOMICA (*Irish Hospital Gazette*, May 1, 1874).—Dr. Luton has obtained excellent effects from the use of nux vomica in chronic alcoholism where the evil has not passed into the absolutely degenerative stage of tissue-change. In the tremors, cerebral, gastro-intestinal, and thoracic disorders of alcoholism, he resorts with confidence to the use of extract or tincture of nux vomica in ordinary doses.

TREATMENT OF VARICOSE VEINS (*Dublin Journal of Medical Science*).—"Should the surgeon be urged to meddle with varices, we would suggest, in preference to the use of the Vienna paste, a careful injection of the vein with the perchloride or the subsulphate of iron. More people have probably escaped death from this treatment than from any of the other numerous operative measures invented for the treatment of the varicose condition of veins."

CONGENITAL STRANGULATED HERNIA IN AN INFANT.—Dr. Somerville (*British Medical Journal*, January 3, 1874) reports the case of a child ten days old, who suffered from a congenital strangulated hernia. A spontaneous cure took place.

A USEFUL extemporaneous splint for fractured limbs is suggested by M. Noiset, consisting simply of gutter-shaped pieces of zinc or tin plate, perforated if possible, for the sake of reducing its weight.

MISCELLANY.

HYDROPHOBIA.—The police authorities in Vienna call attention to the fact that numerous cases of hydrophobia have recently occurred, and that many persons have been bitten by dogs which were actually mad or supposed to be, and have also issued circulars of advice to the owners of dogs. They say that the possessors of these animals should take good care of them, and watch attentively for any symptoms of disease which may indicate the beginning of rabies. Unusual irritability and loss of appetite are set down as sufficient to cause anxiety, even when the animal still continues to drink water. Dogs presenting these symptoms are to be secluded and watched, or, with due precautions, handed over to the authorities of the Imperial Institution for the Care of Diseased Brutes. Dogs are not to be taken into public conveyances or brought into hotels, coffee-houses, and like places of public resort, and when they are taken upon the street, a leash must be used. Violation of these rules subjects the animals to the risk of capture and death from the officials charged with this duty.

It is generally imagined by the public that the antipathy of the profession to quackery originates in a feeling of self-interest, and that quacks take the bread from medical men. We more than doubt if this is true. If the faculty lose and quackery gains a particular case, that is amply compensated by the ill health which quackery produces in thousands, and the disposition to fly to physic which it generates in millions. On the whole, the profession probably gains by quackery—certainly its loss must be very trivial. A feeling of self-interest can sway the profession very little either way, and its antipathy to quackery must be sought on other grounds.

We should say that our aversion to quackery takes its rise in a natural feeling of disgust at a barefaced system of humbug. Unless men's minds are warped by the strongest motives towards wrong, they revolt at witnessing it. We see a knot of rascals fleeing and injuring the public by the most dishonest and scandalous arts. We naturally evince contempt and indignation towards the miscreants.—*Canada Lancet*.

PROSECUTION FOR SYPHILITIC VACCINATION.—At a recent sitting of the criminal tribunal of Hamburg, a public vaccinator, Dr. S., was found guilty of causing injury to the body by neglect, through vaccinating from a syphilitic child, and was sentenced to a month's imprisonment. The facts of the case were briefly these: On August 21 of last year, a male child a year and a half old was brought to the vaccination station of which the defendant had charge, and, under the directions of the defendant, whose duty it was to choose the children from whom vaccination should be performed, was vaccinated from a child a year old, who had syphilis, and itself became affected with the disease.—*British Medical Journal*.

We are indebted to Dr. William W. Keen for an opportunity to read some letters from Dr. John C. Berry, Medical Missionary in Japan. The government has permitted the opening of a dissecting-room under the charge of Dr. Berry, and the Japanese native doctors manifest the greatest enthusiasm in studying practical anatomy. Dr. Keen's edition of Heath's Dissector's Manual is being translated into Japanese, and the proofs of copper (?) engravings made by native artists are the handsomest anatomical cuts we have ever seen.

THE number of students attending the lectures of the Vienna University during the past semester was 3813, of which number 1109 were students of medicine. In the total number, 3813, there is an increase of 373 over the number of students registered for the summer session of 1873.

A CORRESPONDENT in the *London Pharmaceutical Journal* wants to know what becomes of the enormous quantity of *Cocculus Indicus* that is imported. From his statement, it appears there are at present in stock in London some twelve thousand pounds of this poisonous drug, with no visible means for its consumption.

DR. A. E. SANSOM has been appointed Assistant-Physician to the London Hospital.

NOTES AND QUERIES.

MULTIPLE IMPREGNATION.

TO THE EDITOR OF THE PHILADELPHIA MEDICAL TIMES:

DEAR SIR,—The article entitled "Multiple Impregnation," published in the *Philadelphia Medical Times* of the 18th ult., has recalled a similar instance. While in Arizona, I had in my possession a white slut (pointer), which was covered by a dog of her own color and species, and the next day by a black, long-haired cur. In due time she gave birth to seven white pups, and in thirty hours to another which had coarse black hair and resembled the cur in every particular. I watched the growth of these pups with great interest, and found that while the white pups learned to hunt birds intuitively, it was almost impossible to teach the black one.

Very respectfully,
BLUE PILL.

SAN FRANCISCO, CAL.

INAUGURATION OF THE HOSPITAL OF THE UNIVERSITY OF PENNSYLVANIA.

The inauguration of the splendid new hospital which has been erected in connection with the Medical Department of the University in West Philadelphia will take place on Thursday, June 4, at three o'clock P.M. Governor Hartranft will preside at the ceremony, and Hon. William A. Wallace will deliver an address. All medical alumni of the University are invited to attend.

OFFICIAL LIST

OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U.S. ARMY, FROM MAY 19 TO MAY 25, 1874, INCLUSIVE.

BILL, J. H., SURGEON.—Relieved from duty at David's Island, N. Y. H., and assigned to duty as Post-Surgeon at Fort Wood, N. Y. H. S. O. 94, Military Division of the Atlantic, May 9, 1874.

FRYER, B. E., SURGEON.—Relieved from duty at Fort Wood, N. Y. H., and assigned to duty at Fort Wadsworth, N. Y. H. S. O. 94, c. 8., Military Division of the Atlantic.

TILTON, H. R., ASSISTANT-SURGEON.—Assigned to duty at Fort Sully, Dakota Territory. S. O. 94, Department of Dakota, May 12, 1874.

MIDDLETON, P., ASSISTANT-SURGEON.—Assigned to duty at Fort Duncan, Texas. S. O. 72, Department of Texas, May 12, 1874.

SATURDAY, JUNE 6, 1874.

ORIGINAL LECTURES.

CLINICAL LECTURE.

OUR EYES—HOW TO TAKE CARE OF THEM.

Abstract of a Lecture delivered at the University of Pennsylvania,

BY WM. F. NORRIS, M.D.,

Clinical Professor of Ophthalmology.

Reported by S. D. RISLEY, M.D.

LECTURE II.

GENTLEMEN,—At my last lecture I called your attention to three types of eyes—the emmetropic eye, which in a state of rest is able to focus parallel rays of light upon the rods and cones of the retina; the hypermetropic eye, which we saw was too short in its antero-posterior axis, and parallel rays of light were, in consequence, intercepted before reaching their principal focus, thus giving indistinct vision; and finally, the myopic or short-sighted eye, which was too long in its antero-posterior axis, so that parallel rays, after reaching their principal focus, crossed over before reaching the retina, and objects were here again seen indistinctly. It is principally to this latter type, the myopic, that I desire to call your attention to-day.

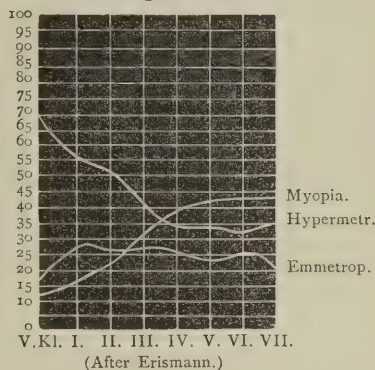
Long ago, Professor Edward Jaeger, by careful ophthalmoscopic examinations of a considerable number of new-born children, proved that the majority are at birth slightly myopic; and his observations upon the cadaver show that this is dependent on the undue convexity of the lens, which in the foetal state having been quite globular has not yet assumed its proper form. Later it becomes less convex, so that myopia becomes emmetropia, and the already emmetropic eyes become hypermetropic.

The serious troubles attendant upon myopia, and its evident tendency to increase in degree, have led many observers to investigate minutely the causes which were active in its production and increase. Dr. Cohn, of Breslau, showed, by the examination of the eyes of over ten thousand of the school-children in that city and its vicinity, that there was a gradual but constant increase of myopia from the primary schools up to the universities. Among the children of the primary schools he found but 6.7 per cent. of myopia, while in the gymnasium classes it had increased until nearly thirty per cent. (26.2 per cent.) were myopic. Professor Erismann, of St. Petersburg, also, in a like examination of the eyes of more than four thousand pupils (4358) found a steadily increasing percentage of myopia in going from the lower to the higher classes. He has delineated his results in the diagram—*vide* Fig. 2.

The figures on the left of the diagram indicate the percentage of emmetropia, hypermetropia, and myopia found in the several classes, ranging from the primary or lowest class up to the seventh class;

the latter representing students in about their eighteenth year. The classes are indicated by the numerals beneath the diagram. The curves of hypermetropia and myopia have for us the greatest interest, inasmuch as that of emmetropia remains

Fig. 2.



nearly stationary throughout. We find, however, that of seventy per cent. of hypermetropes in the primary classes there remain only thirty-five per cent. in the fourth, while the curve of myopia, starting with but twelve per cent., mounts rapidly and continuously, until at the eighteenth year we find that nearly forty-five per cent. of the pupils are myopic.

Now, gentlemen, what does all this mean? Let me tell you at the outset that a near-sighted eye is usually a diseased eye, and the above-quoted results of Cohn and Erismann show us that this disease is in the vast majority of cases either acquired or increased during adolescence.

If you look by means of an ophthalmoscope into a normal eye, you will see, as the most striking object in the fundus, the entrance of the optic nerve, which is here presented to us, as it were, in an optical transverse section. The optic disk then in the normal eye appears as a more or less perfect circle bounded by a thin whitish line,—the so-called sclerotic ring; outside of this again is in many eyes a partial rim of black,—the choroid ring; beyond this again the eye-ground presents a peculiar reddish-brown color and a stippled appearance, mainly due to the even pigmentation of the sexagonal epithelium of the choroid. The color of the disk is of a delicate pinkish red, owing to the capillaries ramifying in the nerve-tissue. A little to the nasal side of its centre there emerge from it the central artery and vein of the retina, which immediately divide into branches, spreading throughout the entire retina, the larger twigs, however, avoiding the point of sharpest vision, the macula lutea. This in healthy eyes on the upright image is frequently marked by a small yellow spot at the fovea centralis, surrounded by a circle more darkly pigmented than the rest of the eye-ground. Although, as before mentioned, this portion is avoided by the larger arteries and veins of the retina, it is most abundantly supplied with capillaries. The colored diagram which I have just shown you gives a clear idea

of the appearances. I wish you to look at it with sufficient care to impress its details carefully in your minds, that you may the better appreciate the anatomical changes depicted in myopic eye-grounds. In slight cases of myopia you will observe that the disk is more capillary, and that certain changes have set in on the temporal side. These at first consist of a disturbance of the choroid pigmentation—in places black, in others lighter than usual, the surface often presenting a ridgy or ploughed-field appearance. The area affected by these changes is usually cone-shaped, the apex pointing towards the macula. The choroid tissue at this point finally undergoes complete atrophy, its vessels disappear, its pigment is absorbed, and we have a thin layer of transparent membrane, through which we obtain a bright white reflex from the sclerótica. But the catalogue of pathological changes by no means stops here; the sclerótica now becomes softened by the long-continued chronic inflammatory processes in the vicinity, and bulges outward under the intraocular pressure, constituting the so-called staphyloma posticum. Inflammatory changes also take place in other portions of the choroid, as, for example, absorption of the epithelial pigment and atrophic patches of greater or less extent, accompanied by vitreous opacities. The vitreous opacities of course cause more or less hazy vision, the local atrophies blind spots (scotomata) in the field. These blind spots only too frequently occur at the macula, and thus destroy all useful vision, or the changes are accompanied by an exudation of serum lifting up the retina from the subjacent choroid, and thus detached it is incapable of long continuing its functions, and the patient becomes totally, hopelessly, blind.

This, gentlemen, is certainly a very serious state of affairs; but I would not have you believe that in all cases does myopia end thus disastrously. By no means is this the case; but in the vast majority of instances where it exists to any considerable degree there is impairment of vision; and such sad cases as I have above described, with either total blindness or what practically for all ordinary employments of life amounts to the same thing, are of only too frequent occurrence, and form one of the opprobria of ophthalmic surgery.

Such being the serious consequences of myopia and its marked tendency to progression, it becomes important to know the causes which are fruitful in its production and increase, that we may as far as possible prevent them.

If an eye be used continuously it becomes congested, just as do all the other organs of the body with physiological use: *e.g.*, in the stomach during digestion the mucous membrane becomes red and congested in the performance of its function—the secretion of the gastric juice; and, as every one knows, the muscles during muscular activity are supplied with increased quantity of blood, which, if long continued or frequently repeated, leads to their rapid increase in size. So it is with the eyes. During their use the choroid and retina become congested—red, from the increased flow of blood to the part. This physiological congestion during the performance of function is the rule with all the

organs of the body, and, like all physiological processes, lapses once more into comparative quiet when the normal stimulus is withdrawn.

The result, however, is quite different when even *normal* stimuli to organic functions are too vigorously applied or too long continued,—when *use* passes into *over-use*. Then what was at first a *physiological* congestion may become the foundation of *pathological* change.

Pre-eminently is this true with our eyes after long-continued use for near work, for there is then required a protracted strain upon the accommodation and convergence. A normal eye, however, under suitable conditions, may even undergo protracted use and experience no injury, the congestion subsiding entirely under rest. When subjected, however, to continuous use under unsuitable conditions, the result may be different, and these unsuitable conditions are too frequently represented in our schools, where from insufficient light or badly-constructed seats and desks the children are compelled to hold their books too near the eyes, thus necessitating an undue strain upon the ciliary muscle and the internal recti, and causing congestion of the eye. The above-named muscles, also, by their conjoint action increase the intraocular pressure, and cause a gradual lengthening of the antero-posterior axis by the giving way of the eyeball at its weakest point, which experience proves to be the region of the optic nerve entrance. At this point and usually at the outer side of the nerve the sclerotic coat is bulged backward, undergoing a corresponding thinning; the choroid, too, loses its pigment and becomes atrophied, causing this protuberant portion of the eyeball to become translucent.

Then, too, the congestion may be increased by position, the blood gravitating to the eyes when the head is bent strongly forward. You are all familiar with the varicose veins of the lower extremities, which so frequently result from too long standing, the coats of the veins distending under the continuous pressure of the column of blood. We have also a striking illustration of the same in inflammations of the extremities, and in the severe pain which ensues when such inflamed parts are allowed to remain long in a depending position. These are but illustrations of the blood gravitating to dependent parts; and if we hold our heads downward the rapid flushing of the face and suffusion of the eyes from stooping are matters of daily experience with us all. This condition is largely aided by anatomical conditions. When the head is bowed forward the neck is flexed, and with it the jugular veins. The return-circulation through them is thus retarded, leading to undue fullness of the lateral sinuses of the brain, and thus backing up the blood in the ophthalmic veins, and consequently congesting all the internal tunics of the eye. Thus position may promote congestion and softening of the choroid and sclerotic coats, and help on pathological changes within the eyeball.

Now, gentlemen, if such causes lead to pathological changes in a sound eye, how much greater danger do they present to a sick one! Thus, starting with a myopic eye, which, as I have told you, is

usually an unsound eye, how much more surely and rapidly will they augment the already existing weakness, and how important that every precaution should be used to obviate its increase!

But little attention has been paid to this important branch of hygiene in our schools, counting-rooms, and workshops. In our schools the children are too frequently compelled to spend the school-hours sitting at desks in which no regard has been paid to the relation between the height of the desk and seat: thus, for example, the chair being so high that the child cannot support its feet upon the floor, it seeks to avoid the fatigue of sitting upright without support, and, in order to bring its eye sufficiently near to the book, bends forward and rests on the desk; or, on the other hand, the desk is relatively too high, and the book thus forced up uncomfortably near to the eyes causes an unnecessary strain upon the accommodation and convergence, resulting in the chain of events I have described to you. Another source of great evil is insufficient light, not only in our schools and churches, but in the buildings devoted to the various mercantile and mechanical pursuits. We all know how in reading by twilight we are forced to approach the book to the eye in order to compensate for the indistinct vision by the larger retinal images, and thus at the same time cause increased strain upon the eye by the accommodation and convergence for this nearer point. The same causes are operative to a less degree in every badly-lighted room, and to make sure of a good light there should be at least three hundred square inches of glass allotted to each scholar in the room, and much more than this where the light is excluded by artificial or natural causes,—*e.g.*, high buildings close at hand, trees, etc. There should also be a frequent change of occupation during study-hours,—thus, from close application over books to other exercises, as recitations, lecture, intermission, etc. I have spoken principally of children in our schools, because it is here that we can accomplish the most good; but in our workshops and counting-rooms, factories, etc., the employees are continually working with insufficient light, and here too there is ample room for reform.

Ordinarily, in reading, the book should be held at from 12" to 14" from the eye; and to enable us to do this we must not only have a good light, but the type must be distinct and of a sufficient size. Putting small type into the hands of our school-children is false economy. Suppose, however, that your patient is unable to read at this distance (12"-14"), that he has become near-sighted, etc., that the ophthalmoscope shows an abnormally red nerve and a commencing or perhaps tolerably developed conus (staphyloma posticum), that the eye is unduly sensitive to a strong light, that it becomes red and painful after use. You have perhaps an example of so-called *progressive myopia*, and one which demands at your hands the most careful attention. In treating such a case, the first indication is to diminish the congestion of the eye by absolute rest. This may be attained by the use of moderately dark smoke-tinted glasses, by putting the ciliary muscles at rest, by repeated instillations

of atropia, and by forbidding all use of the eyes. I say "forbidding all use of the eyes," because although atropia, by paralyzing the accommodation, will effectually prevent all use of an emmetropic or hypermetropic eye, your patient, if he have a high degree of myopia (*e.g.* $\frac{1}{2}$ or more), will still be able to read by holding the book at his far point. The use of atropia will, however, successfully combat the cramp of the ciliary muscle so often accompanying this condition, and put it in a state of complete rest, and the degree of myopia will therefore appear to be diminished. The careful experiments of Dr. Schiess-Gemuseus in a considerable number of cases show, however, that atropinization even continued for six weeks probably does not otherwise alter the state of true refraction. But it undoubtedly by helping to secure absolute rest does give the inflammatory changes taking place at the posterior pole of the eye a chance to subside, and the eye to recover from its irritation.

A very important point in the treatment of myopia is the use of correcting-glasses. When the eyes have become quiet,—*i.e.*, the myopia is stationary,—for the purposes of distinct vision it is essential to wear a concave glass. But a myope, gentlemen, should never be allowed to select his own glass, for he will almost invariably select one which is too strong, to overcome which will always demand an unnecessary strain upon his accommodation, and thus become a source of danger to his already weakened eyes. For distant vision he will require a glass of sufficient strength to correct entirely his myopia,—*e.g.*, if by examination you have ascertained his myopia to be $=\frac{1}{2}$ in order to see distant objects distinctly, he will require a concave glass of twelve inches focus ($=-\frac{1}{2}$); with this, if his acuteness of vision be unimpaired, he should be able to see distinctly No. XX. of Snellen's types at twenty feet. It now becomes an important question to decide whether he shall wear the same glasses both for distant and for near work. While they correct his eyes for distance, it is only by an effort of the accommodation that he can see near objects distinctly. If he is young, with a good range of accommodation, if the choroidal changes are not marked, and if there is no marked tendency to progression, I am in the habit of allowing him to use the same glass for all purposes. If on the other hand the patient has reached middle life, or has a myopia still tending to increase, you must give him two pairs of glasses—the one for distance, which, as we have seen, entirely corrects his short sight, the other of sufficient strength only to place his far point at a convenient distance for his work. For example, if he have a myopia $=\frac{1}{2}$,—*i.e.*, his far point is seven inches from the eyes,—for distance you would prescribe for him $=-\frac{1}{2}$, but for reading or ordinary fine work you would ordinarily want to place his far point only slightly farther from his eye,—*e.g.*, to remove it from 7" to 14". In order to accomplish this, you would subtract the *desired* far point from that already existing, which in the case we have supposed is 7"; therefore $\frac{1}{2} - \frac{1}{4} = \frac{1}{4}$, so that in order to give him $M = \frac{1}{4}$, or, what is the

same, place his far point at 14", we would prescribe glasses — $\frac{1}{4}$ for his near work.

Thus, gentlemen, we have cast a rapid glance at the causes which in every civilized community are constantly producing defects of sight, and which so uniformly increase the already large number of near-sighted individuals. If I have succeeded in impressing on your minds the fact that near-sighted eyes are usually sick ones, and have secured your co-operation in endeavoring to improve the schools and workshops of your immediate vicinity according to the principles above enunciated, I shall have the satisfaction of feeling that I have done much to diminish the quota of sick eyes among our population.

ORIGINAL COMMUNICATIONS.

ON LIGATURES: AN ATTEMPT TO DECIDE ON THE BEST MATERIAL FOR THE LIGATION OF ARTERIES.

WITH EXPERIMENTS.

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(Continued from page 535.)

METALLIC LIGATURES.

IN 1814, Dr. Physick, noticing the immunity with which balls were sometimes lodged in the human tissues, was led to propose the use of metallic threads for the ligation of arteries. It does not appear that he ever put his idea into practice; but Levert, of Alabama, in 1828, was induced by his suggestion to make a number of experiments, with the view of elucidating the action of metallic ligatures in the lower animals.

The use of metallic sutures has had such an important influence in bringing about the employment of ligatures of a similar composition, that a few remarks on this subject do not seem out of place. Purmann, of Germany, in the last century, used silver sutures in wounds of the tongue; and Mihles, of England, used silver and gold thread in hare-lip. In this deformity, Percy, of France, used lead, or gold or platinum covered with lead. Dieffenbach, the great German surgeon, in 1826, advised the use of lead wire in staphyloraphy. In 1831, Mettauer, of Virginia, published a case of ruptured perineum in which the lead suture was successfully employed; and in 1847 he detailed the successful results of the employment of lead wire in vesico-vaginal fistula. In the later operation he had, however, been anticipated by a London surgeon named Gosset, who, in 1834, cured a long-standing case of vesico-vaginal fistula by paring the edges and uniting them with silver wire coated with gold.*

Marion Sims, of New York, in 1852 began to urge the claims of silver wire as a suture generally, and especially in cases of vesico-vaginal fistula, with such enthusiasm that metallic sutures came into very general use, and may now be considered as established in many operations.† In fact, before

their introduction, the cure of a case of vesico-vaginal fistula was almost, if not quite, unknown. In proof of the unirritating character of silver sutures, Prof. Agnew states that he has known them to remain *in situ* after the operation mentioned for three months without producing the slightest disturbance;‡ and Redfern Davies recorded a case of staphyloraphy in which a silver suture was left in place for four years with equal immunity.§

Induced by such facts as these, Simpson, in 1858, made use of ligatures of platinum wire in a case of excision of the breast. The wound was closed by metallic sutures, and collodion applied. Healing by granulation ensued, and the ligatures were thrown off during the process of suppuration.|| In the subsequent year, Dr. Emmet, of New York, repeated Simpson's experiment, using silver wire instead of platinum. The result will be given under the proper head.

Iron-wire ligatures were used by Holt, of London, in 1864, in three cases of excision of the breast, one of amputation of the arm, and another of the leg. Twenty-nine ligatures were used, none of which were seen to come away. In no case was union by first intention secured. Iron-wire ligatures, the ends of which were left hanging from the wound, were used in two cases of amputation by Langenbeck. They came away after a longer interval than when silk is used.

SILVER LIGATURES.

Experiments on animals.—Levert was the first to make experiments with silver and other metallic ligatures. He tied the carotid in two dogs, and the femoral in a third, with silver. In all three cases the wound healed by first intention, and, on dissection, it was found that "the silver had become encysted."¶ He does not state whether the ligatures were found *in situ*, or whether the vessels had been cut through. Gold and platinum acted in the same manner as silver.

Sir James Y. Simpson, in 1858, repeated these experiments, employing silver and numerous other metals. He never published a detailed account of his experiments, but stated, in his work "On Accupressure," that the results corresponded with those of Levert. "The metallic loops remained in their original situation around the obliterated point of the artery, with no apparent tendency to displacement or ejection, and the metallic threads were intimately blended in and among the effused lymph and tissues." He found that none of the metals produced suppuration, while silk almost invariably did.

Kellburne King states that he has repeated Levert's experiments, with similar results.**

But by far the most elaborate experiments on silver wire have been those of Professor Howard,†† on the carotid arteries of sheep. The interesting

† Lectures on the Treatment of Wounds, delivered at the University of Pennsylvania.

‡ Lancet, Feb. 28, 1873.

§ Edinburgh Medical Journal, July, 1858, p. 76.

¶ Loc. cit.

** Lancet, October 6, 1866.

†† Op. cit.

* Lancet, Nov. 29, 1834, p. 345.

† See Agnew on Vesico-Vaginal Fistula, passim.

character of his observations is unquestionable, though the deductions drawn from them are not to be considered as proven.

Subjoined is a table, giving the results of these experiments. The ligature, as is indicated, was tied with various degrees of tightness. In all cases it caused the formation of a capsule of lymph around the spot to which it was applied, and the artery was closed in every instance.

NO.	DEGREE OF TIGHTNESS OF LIGATURE.	RESULTS OF DISSECTION.	INTERVAL BETWEEN OPERATION AND DISSECTION.
1	Very tight.	Suppuration at point of application. Ligature extruded.	22 days.
2	Not quite so tight.	Suppuration at point of application. Ligature on its way to surface.	
3	Tight enough to secure apposition, but not wound artery.	Suppuration at point of application. Ligature on its way to surface. (In these three cases the ligature was applied to the same artery, at short distances from each other.)	
4	Tight.	Ligature found enclosing a slough in cavity of abscess.	56 days.
5	Artery two-thirds closed.	No suppuration. Ligature <i>in situ</i> , enclosed in a solid mass of lymph.	37 days.
6	Same.	No suppuration. Ligature <i>in situ</i> , enclosed in a solid mass of lymph.	23 days.
7	Same.	No suppuration. Ligature <i>in situ</i> , enclosed in a solid mass of lymph.	10 days.
8	Same.	No suppuration. Ligature enclosed in a capsule. It had divided the external coat, and was in contact with the middle coat; vessel obstructed by a firm clot.	10 days.
9	Same.	No suppuration. Ligature could not be found; some fibro-cellular tissue at point of application; artery occluded.	14 months.
10	Same.	No suppuration. Ligature <i>in situ</i> , in small capsule. Artery solid and hard for some space. Same appearance as in No. 10.	10½ mos.
11	Same.	No suppuration. Ligature <i>in situ</i> , covered by a thin layer of lymph. Artery not obstructed by clot.	13½ mos.
12	Applied so as not to obstruct vessel at all.		

It will be noticed that in the instances in which the ligature was applied firmly, or even drawn so as to bring the walls of the vessel in apposition, suppuration ensued. In this respect these experiments differ from all previous ones, and from those of the writer. Howard attributes this discrepancy to the alleged fact that sheep approach more nearly to man in regard to vulnerability; whereas, he says, dogs, on which most of the previous experiments have been made, are notoriously tolerant of injury. That sheep are less tolerant of injury than dogs may fairly be disputed, seeing that in all of Howard's experiments the wound healed by first intention; whereas, in Lever's dogs, the reverse was frequently the case. Moreover, Simpson's experiments were made on a large variety of domestic animals, yet his results agree with Lever's.

When we examine these experiments of Howard's more closely, we see that they are not in all respects fair. Thus, the first three were made on the same vessel, the ligatures being applied within a short distance of each other, and the sheath being necessarily much disturbed; hence we cannot wonder at

suppuration ensuing. If, then, we eliminate this unfair experiment, we have only one instance in which the tightly-drawn silver caused suppuration, and that is scarcely enough to support the entire weight of Dr. Howard's theory, that the firm application of the silver ligature is the sole cause of the mischief which follows its use.

The remaining eight experiments were not altogether successful in proving that the slack silver ligature will remain *in situ*; for in one, at the end of ten days, the external coat had been divided, and in another, when the parts were examined at the end of fourteen months, the ligature could not be found, having evidently worked its way to the surface.

Professor Howard, as a practical application of the results of his experiments, considers that the best way to ligate an artery for aneurism is to diminish its calibre two-thirds with a short silver ligature. The single case in which this plan was tried certainly did not terminate encouragingly, for the man died of hemorrhage.

Experiments of the Writer.

Exp. X.—A coil of silver wire, eighteen inches long, was placed in the peritoneal cavity of a cat, and the wound closed with one deep and three superficial silver sutures. The wound healed by adhesion, and the superficial sutures dropped out without suppuration. A hard swelling formed at the spot, and in fifty-nine days its apex opened and discharged a little pus, and in a few days healed again.

On the seventy-third day, the animal was dissected. The coil of silver was entangled in the omental layers, surrounded by an indistinct transparent membrane. The swelling at the site of the wound consisted of a mass of lymph enclosing in its centre a little pus and the deep suture, which was long and sharp-pointed.

Exp. XI.—A portion of the muscular mass forming the thigh of a cat was surrounded subcutaneously with silver wire. Profuse suppuration ensued, and on the twenty-fifth day as much of the wire as possible was taken out. It was much bent and twisted. The parts now healed.

On the seventy-fifth day, dissection revealed a piece of wire about an inch long imbedded in the muscle. No traces of a cyst existed.

Exp. XII.—A small coil composed of one foot of silver wire, so disposed as not to present any sharp points, was placed under the integument of a cat's shoulder, and the wound closed by silver sutures. The incision healed without suppuration; the sutures were removed on the tenth day. An abscess formed, and burst on the twenty-eighth day, giving exit to a small quantity of pus. In a few days more the silver was extruded, after which the ulcer immediately healed.

Exp. XIII.—Small coils (made as nearly as possible of the same bulk) of the following materials were placed in cavities under the skin of the side of a large cat, each opening being closed with a stitch of the corresponding material: silver, lead, iron, saddler's silk, carbolized silk, linen thread, catgut of the thickness of saddler's silk, carbolized catgut of the same dimensions, and carbolized catgut a size thicker; the wounds all healed without suppuration.

In forty-two days the animal was dissected. The silver was enclosed in the cavity of an abscess; the thick carbolized catgut was not present, having been extruded by suppuration on the tenth day; a few shreds of the other two pieces of catgut (carbolized and non-

carbolized) were found enclosed in small cysts. The lead, iron, linen, and both kinds of silk were each enclosed in a very thin transparent capsule, and had not caused the slightest irritation.

Exp. XIV.—The carotid of a dog was tied firmly with silver wire. The wound was sewed up with a continuous suture of carbolized catgut. On the fourth day it was necessary to cut several stitches to allow some pus and serum to escape, after which the wound healed rapidly. In fifty-three days the parts were examined. The ligature, enclosed in an indistinct cyst, lay immediately beside the artery, which was slightly indented at the point of ligation, and after being laid open was found to be obliterated to the extent of three lines.

Exp. XV.—The carotid of a cat was tied firmly with silver. The wound was closed with a continuous suture of hemp; it healed slowly, from the animal tearing out the suture.

In twenty-seven days the parts were examined. The ligature had nearly cut through the vessel. It was covered with a thin pellicle of organized lymph.

Exp. XVI.—The carotid of a cat was tied firmly in two places, one-quarter inch apart, with silver wire, and divided between the ligatures. The incision, which had been closed by a continuous stitch of fine sewing-silk, united by first intention.

In thirty-six days the animal was dissected. The silk suture was still in place, having created no irritation whatever. The ends of the vessel were united by a band of organized lymph about half an inch long. The lower ligature had cut its way through the artery, and was lying near it enclosed in a thin transparent cyst; the upper ligature still surrounded the vessel, and was enclosed similarly.

Exp. XVII.—The carotid of a cat was surrounded in two places with silver wire drawn with sufficient firm-

ness merely to diminish the calibre of the vessel two-thirds. The wound was treated as in the last experiment, and with the same result.

In fifty-one days the parts were examined: the upper ligature was still *in situ*; the lower had cut its way through the artery, and was lying near it; the position of its application was shown by a delicate cellular interval; both ligatures were covered by a thin membrane.

Exp. XVIII.—The left common iliac and the abdominal aorta of a cat were each surrounded by a silver ligature, applied so as not to stop pulsation, but, so far as could be guessed, to diminish the calibre about two-thirds. The sheath of the vessels was not disturbed except just at point of ligation. The inguinal incision was closed by silver sutures; slight superficial suppuration ensued, but healing was complete in a few days.

In sixty-three days the parts were examined; a large cyst was present at the point of ligation. On opening, it was found to contain imperfectly laminated blood-clots, and lying loose at its bottom was the aortic ligature. The aorta communicated with the cyst, and was patulous in both directions. The iliac ligature was found loose in a small cavity in the side of the cyst; it had divided the vessel, which, however, was obliterated.

RESULTS OF THE USE OF SILVER LIGATURES ON MAN.*

1. *Ligation of Arteries in their Continuity.*—Stone, of Louisiana, in 1859, was the first to make this application of silver, but without decisive results, on account of the speedy death of his patient from dysentery. In the following table will be found the details of all the cases published in which silver wire has been applied to arteries in their continuity.

NO.	OPERATOR AND REFERENCE.	AGE.	ARTERY TIED.	DISEASE.	SUBSEQUENT HISTORY OF THE CASE.
1	F. Maury. Phila. Med. Times, March 29, 1873, p. 404.	52	Right subclavian (third part).	Axillary aneurism.	The degree of tightness of the ligature is not stated. The man did well until the eleventh day, when secondary hemorrhage occurred. During the first and second attacks he lost more than a pint of blood; during the third, which occurred on the same day, the blood gushed out in a full stream, and in about three hours the man died. "The post-mortem showed the ligature in good position, and just ulcerating through. The subclavian artery was in part filled with a fibrinous coagulum, and partly with a soft clot, evidently more recent, from the innominate to the ligature." It is said that the aorta and heart were in an advanced stage of fatty degeneration; but, by a strange omission, the condition of the walls of the ligated artery is not given.
2	T. Smith. Holmes' System of Surgery, vol. iii.		Radial.		The wire had to be cut away in about three months, on account of "the inconvenience it caused the patient."
3	Stone. Am. Jour. Med. Sci., Oct. 1859, p. 570.		Common iliac.	Inguinal aneurism.	Wire drawn with sufficient firmness merely to stop pulsation. Death from dysentery on the twenty-sixth day. No autopsy.
4	Pollock. Lancet, Sept. 22, 1866, p. 328.	51	External iliac.	Femoral aneurism.	Ligature drawn tight enough merely to bring sides of vessel in contact. In three days the man died from bronchitis. On autopsy, it was found that the wound had not commenced to heal. Coats of vessel perfect. Decolorized and partially adherent clots above and below the ligature.
5	C. H. Mastin. New Orleans Med. and Surg. Reporter, Sept. 1866.		External iliac.	Inguinal aneurism.	The wire was tied with a double knot tightly enough to stop pulsation only; the ends were bent down, and turned into the sheath. The wound healed by first intention. Perfect recovery ensued. Nothing has ever been seen of the ligature, though the man is still under observation.
6	T. Holmes. Lancet, Sept. 22, 1866, p. 328.	43	Femoral.	Traumatic popliteal aneurism.	Wire drawn tightly enough to stop pulsation merely. On the seventh day the wound was nearly, and on the twelfth quite, healed. On the fifteenth day he left the hospital. Nothing was ever seen of the ligature, though the man was under observation for two years.
7	Kellburne King. Lancet, Oct. 6, 1866, p. 400.			Aneurism.	The writer merely states that he ligated the artery with silver, and that the operation was satisfactory so far as the ligature was concerned, but that the patient died of rupture of the sac.
8	Kellburne King. <i>Loc. citat.</i>			Aneurism.	No details are given, except that hemorrhage occurred on the eighth day; that silk ligatures were applied above and below the silver ligature, and the patient recovered.

* Except in some cases of Erichsen's, which will be mentioned, where silver ligatures were used, they were always cut short and buried in the wound.

NO.	OPERATOR AND REFERENCE.	AGE.	ARTERY TIED.	DISEASE.	SUBSEQUENT HISTORY OF THE CASE.
9	Brodhurst. Trans. Path. Soc. London, vol. xviii. p. 67.	46	Femoral.	Femoral aneurism.	The ligature was applied "loosely." On the seventh day, wound nearly healed; on the tenth day hemorrhage occurred, but was controlled by a pad for a few hours, when it recurred. The artery was now tied higher up with two silver ligatures. On the twelfth day hemorrhage recurred, and a silk ligature was applied on the proximal side of wound. On the thirteenth day the man died of exhaustion. On autopsy, it was found that the ligature first applied had cut its way seven-eighths through the vessel, the distal orifice of which was patulous. The three other ligatures were intact on the proximal end of the vessel, which was occluded. The arterial system was degenerated.
10	Benjamin Howard. Trans. Am. Med. Assoc., 1872, p. 559.		Femoral.	Popliteal aneurism.	The wire was drawn so as to diminish calibre of artery two-thirds. Wound healed by first intention, except at one end; pulsation ceased in aneurism. On eleventh day, walked a considerable distance. On seventeenth day, hemorrhage. On nineteenth, a silk ligature was applied below Poupart's ligament. The history of the case from the seventeenth day is very imperfect, but the reporter was informed that five or six days after the application of the silk ligature the man died of hemorrhage.
11	Redfern Davies. Lancet, Feb. 28, 1868, p. 233.		Popliteal.	Elephantiasis Arabum.	The ligature came away on the twenty-first day. The patient recovered so far as the operation was concerned.

Several additional cases are referred to in Prof. Gross's work on Surgery, and the reader is left in doubt as to whether the ligature was encysted or not. In a conversation with this author, he stated as the result of his experience that the ligature came to the surface, though after a longer interval than in the case of silk.

In Mr. Holmes's "Lectures on Aneurism" he states that the only satisfactory case on record is his own (No. 6). If we also except Dr. Mastin's case (No. 5), of which the talented lecturer seems strangely ignorant, certainly our experience with silver ligatures in the treatment of aneurism is anything but satisfactory.

Of the remaining nine cases tabulated, three (Nos. 3, 4, and 7) died of causes unconnected with the ligature; secondary hemorrhage occurred in four cases (Nos. 1, 8, 9, and 10), in three (Nos. 1, 9, and 10) of which it proved fatal; in one case (No. 11) the ligature came away just like the ordinary ligature; and in another (No. 2) it had to be cut out.

2. *Silver Ligatures in the Abdominal Cavity.*—Peaslee states that he has seen several attempts to apply silver wire to bleeding vessels in ovariectomy, but without success; the ligature slipped off as soon as applied.* Sims informs us† that for the last ten years he and his colleague, Dr. Emmet, have, as a rule, in this operation, secured the pedicle with silver wire and returned it to the abdominal cavity without any bad result ensuing. The latter gentleman has published the details of two cases thus treated, both recovering without a single bad symptom.‡ However, the evidence in favor of silver thus applied is not so strong as that on the side of silk; for in the first case we have little more than a general assertion, while in the latter we are supplied through the industry of Peaslee with the fullest information. Prof. Agnew mentions a case which came under his observation in which he attributes the death of the patient to the application of a silver ligature to a wounded omental artery.§

3. *Application of Silver to Arteries* divided in Operations.*—Platinum ligatures, as we have seen, proved not a whit superior to silk in the hands of Simpson. In Dr. Emmet's case, already referred to, silver was used with somewhat better success, though we are left ignorant of the ultimate disposition of the ligatures.

The breast of a woman, aged 31, was excised for scirrhus. Eleven silver ligatures were applied by twisting. The wound was accurately closed by whipped silver sutures. Healing by adhesion occurred nearly throughout, but the dependent angle of the wound required to be kept open to allow of the escape of some pus, which the author thinks was formed "in consequence of the death and suppuration of the portion of tissue strangulated by the ligature." On the eighth day a portion of the suture midway was found to be torn out. The fissure thus formed healed by granulation, so that by the fifteenth day the wound was entirely healed. The suture was not removed until forty-three days had elapsed. The most careful examination failed to reveal the position of any of the ligatures, though none had escaped.||

Dr. F. D. Lente has published a similar case:

Mrs. M., breast removed, for scirrhus; ten silver and one silk ligatures applied; wound closed by five silk sutures. On the eleventh day a small abscess was opened; on the fifteenth day there was slight discharge from the lower end of wound, the remainder of which was healed. On the fifty-fifth day "a loose wire was felt floating about in situation of abscess," and was removed by a small puncture.¶

In amputations of the extremities silver ligatures have been used by Erichsen and Lente. The former writer gives his experience thus:

"If the ends of the wire were left out of the wound, the noose became imbedded in a mass of plastic matter, did not separate, and, after several weeks, required considerable force to detach and disconnect it. If the ends were cut short, the sides of the wound healed over them; they became encapsuled, but by no means innocuous; in some cases giving rise to severe neuralgia of the stump by pressure on and irritation of neighboring nerves; in others after some weeks causing localized circumscribed abscesses to form."***

* Op. cit.

† New York Journal of Medicine, December, 1872.

‡ American Journal of Obstetrics, 1872.

§ Lecture on Wounds of the Abdomen, delivered at the University of Pennsylvania.

|| American Journal of the Medical Sciences, July, 1859, p. 120.

¶ American Journal of the Medical Sciences, April, 1869, p. 309.

** System of Surgery, vol. i. p. 281.

Our talented countryman, Dr. F. D. Lente,* has given us more detailed information on this portion of the subject. A short account of his cases is given, that the reader may be enabled to judge for himself of the merits of the method:

1. Re-amputation of the thigh—nine short silver ligatures applied. Six hours afterwards stump bled profusely. An assistant opened the stump and tied four or five vessels with silk. He saw nothing of the silver ligatures, and *thought* that the vessels he tied were not those to which the silver had been applied. On the fifty-first day, the note states, the wound was healed and gave no trouble.

2. Amputation of fore-arm—six short silver ligatures applied. Lips of wound brought together by fine silk sutures. Antiseptic dressing. "Considerable oozing of dark, bloody matter" while dressing wound. Eighth day, wound suppurating; oozing of dark blood continues. Thirty-ninth day, stump soundly healed and gives no trouble.

Of the third case (amputation of leg), and the fourth (of the arm), the note merely states that suppuration of the wound occurred, and that recovery was slow.

It will be seen that the first two of these cases were complicated by secondary hemorrhage.

In one of them, indeed, one cannot avoid a strong suspicion that some of the ligatures slipped from the ends of the vessels. It is not stated that the wires did not come away, though we are led to infer that such was the case.

Finally, we are left in the dark as to whether any subsequent trouble, such as Erichsen indicates, occurred.

Dr. Lente was kind enough to respond to inquiries concerning his subsequent experience with silver ligatures, substantially to the following effect:

1. Their use requires the aid of an intelligent assistant.
2. He does not claim that "any larger proportion of cases heal by first intention than by other methods."
3. In amputations "most of the ligatures come away." They may easily escape notice on account of their small size. "In other operations, when union by first intention fails, the number that comes away depends on the amount of suppuration and of granulating surface. The proportion is very small."†

LEAD LIGATURES.

As with silver, Levert was the first to experiment with lead-wire ligatures.

1. He tied the carotid of a dog firmly with lead wire. The wound healed by granulation. On dissection, in forty-three days, the lead was found encysted near the artery, which was entirely removed for the space of one-half inch. Both ends of the vessel were firmly sealed with organized coagula.

2. The same experiment repeated. On dissection, after twenty days, the ligature was found encysted and surrounding the remains of the vessel. In three similar experiments, identical results were obtained after intervals respectively of twenty-nine, twenty-two, and twenty-seven days.

Howard obtained opposite results in his experiments with sheep, but, as will be seen, the ligatures, except in one instance, were quite bulky. Consequently, his observations cannot be accepted as fair evidence in favor of the idea that lead is more irritating to the tissues than silver.

1. Thick lead wire was applied to carotid, and drawn so as to bring its walls in contact. The ends of the ligature were enclosed in perforated shot, and the wound closed. In twenty-seven days, examination showed the ligature, enclosing a slough, in an abscess, which was making its way to the surface.

2. A thin lead band was used, with a like result after thirty-seven days.

3. Carotid closed two-thirds by lead ligature, with a like result after thirty-six days.

Experiments of the Writer.

Exp. XIX.—A coil composed of one foot of lead wire was placed under the skin of a cat's shoulder, and the incision closed by a single lead suture. The wound healed, and the suture dropped out without suppuration. On examination, fifty-one days after, the coil was found enclosed in a thin transparent cyst.

Exp. XX.—The carotid of a cat was surrounded with lead wire, drawn rather loosely. The incision was sewed up with a continuous suture of carbolized catgut, and carbolized dressings applied. In three days wound was suppurating profusely; granulations sprang up, and it was healed by the fourteenth day. On examination, thirty days after, the ligature was found *in situ* within an indistinct capsule. The artery was obliterated.

Exp. XXI.—The carotid of a cat was tied firmly with lead wire, and the wound drawn together by lead sutures. It healed by first intention, and the sutures dropped out. On dissection, thirty-one days after, the lead had passed through the artery (which presented no break in its continuity), and was enclosed in the cellular tissue about two lines from it.

Exp. XXII.—The carotid of a large dog was tied firmly with lead, and one inch above with catgut (non-carbolized). The sheath was not disturbed in the interval. Hempen sutures were used. They were soon torn out by the animal, so that several days elapsed before the wound was healed. On examination forty days after, neither ligature could be found. The lead had probably made its way to the surface, and the catgut been absorbed. The artery was obliterated between the joints of ligation, but presented no break in its continuity.

Exp. XXIII.—Equal bulks of lead wire, silver wire, silk, and carbolized catgut were placed in corresponding positions in the muscles of different cats. In thirty-two days the animals were dissected. The lead was found enclosed in a thin cyst; the silver was also in a cyst, which contained in addition a few drops of pus; the silk was likewise encysted. The carbolized catgut was not present, having escaped by suppuration on the fourteenth day.

THE USE OF LEADEN LIGATURES ON MAN.

Professor Agnew applied a leaden ligature to the brachial artery in a case of aneurism of that vessel.‡ Perfect and rapid recovery ensued, the wound healing by first intention, and the ligature never making its appearance. The happy termination of this case (which is the only one that has come to the writer's knowledge of the use of lead as a ligature in the human subject) makes it desirable that an extended trial should be given to lead in cases of aneurism. Certainly, experiments on animals prove lead to be of an exceedingly unirritating nature.

(To be continued.)

* Loc. cit.

† MS. letter.

‡ Lecture on Aneurism, delivered at University of Pennsylvania, course of 1873-74.

EXTENSIVE INJURY TO THE LARYNX, TRACHEA, AND ŒSOPHAGUS; AND RECOVERY.

BY C. H. BOGMAN, M.D.,

Salt Lake City, Utah.

JUNE 18, 1869, I was summoned to attend W. A. P., aged 57, who had attempted suicide by cutting his throat. Two hours subsequent to the attempt I found him held upon the bed by several men, and, with the strength of a maniac, endeavoring to tear open the wounds in his throat.

He was suffering from acute mania, of which the suicidal attempt was the first symptom noticed by his family.

Upon examination, I found two wounds; the superior dividing the larynx for full half its diameter through the thyro-hyoid membrane, and the inferior completely dividing the trachea just below the cricoid cartilage, and also opening the anterior walls of the Œsophagus by an incision five-eighths of an inch in length. Both incisions were made with a large-bladed, keen-edged pocket-knife. The large vessels of the neck were uninjured, and the hemorrhage from three small vessels in the inferior flap was controlled by direct pressure.

Having ligated the vessels, and thoroughly cleansed the parts, the wound of the Œsophagus was united by three fine silk sutures, the knots being tied in such a manner as to be inside the Œsophagus.

The inferior wound of the trachea was then closed by six coarse wire sutures, two placed postero-laterally to prevent their irritating the wound of the Œsophagus, two laterally, and two antero-laterally. The superior wound of the larynx was then closed by four wire sutures.

In both cases the sutures were made to include as much as possible of the superlying and attached fibrous and cellular structures, twisted as tightly as possible without strangulation of the included tissues, and the ends cut as short as was consistent with strength and permanence.

The external wounds were closed by silk sutures, and a wet compress covered the whole. Strips of adhesive plaster were applied to the shaven head; their centres being on the occiput, and the head well flexed, their long ends were brought forward, crossed on the breast, and carried round to the lumbar region, the whole being arranged so as to prevent extension or rotation of the head.

He was then well secured, to prevent violence; morphia was exhibited hypodermically, and sedatives and aliments in solution, by means of a flexible tube, carried well into the pharynx. The medical treatment consisted principally of sedatives and tonics.

Recovery was slow and tedious. There was profuse suppuration from both wounds; the mania entirely disappeared on the eighth day, and left him greatly prostrated. The wounds were frequently syringed with the permanganate of potassium in solution.

In September, 1869, the wound was healed, except a small fistule in the thyro-hyoid membrane, through which a probe was readily passed into the larynx. Both voice and deglutition were greatly impaired.

At present (May 15, 1874), with the exception of a peculiar resonance, the voice is unimpaired; articulation is peculiar,—to use his own expression, "as if I had a hot potato in my mouth."

Deglutition is performed easily if the attention is directed to it, otherwise the food "goes the wrong way."

In other respects he is perfectly well. The fistule healed voluntarily; the encysted wire sutures are readily felt in the larynx and trachea. He has had no return of the mania, and expresses himself dissatisfied with the knife as a means of suicide.

NOTES OF HOSPITAL PRACTICE.

PHILADELPHIA HOSPITAL.

SERVICE OF PROF. H. C. WOOD.

Reported by E. T. BRUEN, M.D., Resident Physician.

CASES OF SCIATICA.

W. S. entered this hospital April 14, 1874, suffering from well-marked symptoms of sciatica. He has been more or less a sufferer for the past two years, while under the most varied treatment in different hospitals. A saline purge was ordered to be given every other day for a week, together with the following:

R Potass. acetat., ʒi;
Potass. iodidi, ʒii;
Aq. cinnamonom., fʒvi.—M.

Sig.—Tablespoonful t. d.

The daily use of the downward continuous current from eighteen cells was directed in addition; to be applied over the course of the nerve. After the first application of the electricity he said he felt greatly relieved, and in a period of ten days he could walk without pain, and was discharged cured April 30.

G. W., æt. 50, admitted to the ward April 20, suffering from the ordinary symptoms of sciatica, which he stated first attacked him two weeks previously. His pain was so severe that he could only walk with much difficulty, supporting himself with a cane. The continuous current of electricity from eighteen cells was employed, without any other treatment. He felt markedly benefited after the first two applications of fifteen minutes each, and could walk without his cane; at the expiration of ten days he was discharged perfectly cured.

CASE OF TAPE-WORM.

W. S., æt. 26, native of England, admitted to the hospital April 30, 1874. He states that he has had a tape-worm for some years; he has been in this country about three months, and during this time he has passed a number of links of it at intervals. He has been subjected to treatment for his worm several times in different London and Liverpool hospitals, and although large portions of the tape-worm had been obtained, the head had never been passed.

His occupation abroad was that of a game-keeper, and according to his own statement he has never eaten raw pork, beef, or meat of any kind. He is a strong man, his health having been only slightly affected; he complains, however, of headache, a sense of pain or uneasiness in the abdomen, with depression of spirits and nervousness, which prevent him from working; he has also a ravenous appetite. He was kept a few days in the house on restricted diet, after which the following treatment was instituted. A dose of salts (Rochelle), one ounce, was given one evening at five o'clock. No supper was allowed, excepting a glass of milk. The next day the following prescription was administered:

R Granati rad. cort.,
Pepo, aa ʒss;
Ergotæ, ʒss;
Ext. fil. mas, ʒi;
Pulv. acaciæ, ʒii;
Ol. tigllii, gtt. ii.—M.

Et ft. emulsion.

It occasioned slight nausea, and operated three times freely.

On examining the stool a tænia solium eighteen feet long was found expelled in a single piece rolled in a ball, knotted in at least ten knots. The links seemed to have parted close to the head, as they were very

small, but the head itself was not found, though the stools were examined with great care. As the man passed no more links, he was discharged at the end of a week.

TRANSLATIONS.

TRACHEOTOMY PERFORMED BY MEANS OF THE ACTUAL CAUTERY.—M. de St. Germain read before the Académie de Médecine, at a recent sitting, an account of the operation for tracheotomy as performed by him recently.

After some remarks relative to various experiments which he had made on different animals, M. de St. G. went on to say that this was the first opportunity which had offered for the trial of the procedure in a human being, and then gave the following details:

A child, 3 years of age, admitted to his wards January 26, 1874, for club-foot, was attacked by measles, followed by bronchitis. He was nearly convalescent from this disease, when he presented unequivocal signs of diphtheritic angina. Gray pseudo-membranous plaques appeared on the right tonsil, then on the left; finally, his voice was almost lost, and became decidedly croupy.

This was on February 23. On the morning of February 24 very marked difficulty in drawing the breath was noted, but no cyanosis. The usual treatment was resorted to, but without avail, and by evening the breathing had become much more difficult, and decided cyanosis had manifested itself.

Under these circumstances tracheotomy was determined upon, and the operation was carried out in the following manner. The child was placed upon a mattress-covered table, with his shoulders supported upon a sort of bolster formed of an ordinary pillow tied tightly around an empty bottle placed at its centre. The arms and legs being firmly fixed, an assistant held the head well back, so as to throw the larynx very prominently out. The operator having taken his position on the right of the patient, and having determined as exactly as possible the point corresponding to the crico-thyroid membrane, seized the larynx between the thumb and middle finger, and pressed it firmly on the deeper parts. This manœuvre had the advantage of isolating the larynx absolutely, and of making it perfectly immovable, as well as of rendering tense the overlying integument. (It might be said here that the immobilization of the larynx, during a period relatively quite long, has not the dangers which have been attributed to it. M. de St. G. had been able, in experiments made on various children, to render the larynx immovable without danger during a period three times as long as that necessary to perform tracheotomy.)

The larynx being fixed, the operator seized a small, thin-bladed probe, or rather dull-pointed bistoury, and, having brought it to a cherry-red heat by means of an enameller's lamp, introduced it slowly in a perpendicular direction, cutting from base to point, as had been determined, that is to say, immediately below the thyroid cartilage. Penetration was very easy, and a very slight sensation of resistance overcome indicated that the crico-thyroid membrane had been traversed. Then, the bistoury not having been removed, the cricoid cartilage and one ring of the trachea were divided, when the instrument was taken out. The existence of a very clean wound could then be noted, yielding no blood, and showing, at the deepest part, a black slit, the laryngo-tracheal incision. It might be noted that the usual sounds significant of air entering the trachea were not heard until the two-branched dilator was introduced, when hissing sounds were manifested.

The patient now respired easily, and the canula was

introduced at leisure, and with the greatest facility. When once introduced, however, the canula was found not to act. The cause of this was soon discovered in an enormous plug of false membrane stopping up its lower end. This being removed by coughing the moment the canula was taken out, the latter was again introduced, and secured by the usual methods.

(It may be remarked that during the whole of the operation the patient had not lost a teaspoonful of blood in all.)

The child was removed to a bed, surrounded with hot bottles, and watched with the greatest care. For two days all went well; on the third, however, it was ascertained that false membrane was forming still. The canula having been removed from the wound, the latter was found to present the usual appearance following tracheotomy. From this day the child gradually grew worse, and finally succumbed on the fourth day subsequent to the operation.

The autopsy showed considerable pulmonary congestion and emphysema, also a quantity of false membrane in the trachea, constituting a sort of cast. The wound looked natural, and the cauterization had not affected the lateral or posterior portions of the trachea.

The writer who reported M. de St. Germain's case in the *Gazette Médicale* asks two questions in relation to it. First, whether, if the bistoury should get cold, it might not act simply as an ordinary knife, thus leading to hemorrhage? Second, if, on the other hand, the blade should be a little hotter than usual, might not the cauterization of the cartilages lead to their necrosis? These questions remain to be answered. A. V. H.

TRANSFUSION OF BLOOD IN THE INSANE.—Prof. Meynert (*Wien. Med. Presse*) states that the operation of transfusion was frequently performed in England in the seventeenth century in patients suffering from mental affections, but that it could not be supposed that in such cases, even under the most favorable circumstances, the operation would be attended with favorable results.

In cases of melancholia, however, it might be possible to look for a favorable result from the operation, since the transfused blood might act as an irritant, and, like febrile affections, cause an intermission of the state of melancholy. In three cases in which the operation with defibrinated blood was performed by Redner, the pulse rose from fifty to eighty beats per minute, and two of the patients, half an hour after the operation, felt better, and were more cheerful; but this improvement was but transitory. A quarter of an hour later the pulse could scarcely be felt; vomiting, micturition, and defecation took place, followed by a chill of violent character, and fever of three days' duration. W. A.

INJURIOUS EFFECT OF HUMAN MILK UPON DOGS.—M. Devilliers stated in a report read before the Académie de Médecine on this subject that the researches which he had made proved human milk to possess the quality of rendering dogs rachitic.

Advantage had been taken of this circumstance in the employment of the milk of dogs for the nourishment of young children suffering from rachitis. What the result of this treatment proved to be is not stated; but in the discussion which followed the reading of M. D.'s report it was remarked that this injurious action of human milk had already been observed, in cases where young women had used puppies for "drawing the breast." The animals were observed under these circumstances to succumb speedily.—*Bull. Gén. de Thérap.* A. V. H.

PHILADELPHIA

MEDICAL TIMES.

A WEEKLY JOURNAL OF

MEDICAL AND SURGICAL SCIENCE.

The Philadelphia Medical Times is an independent journal, devoted to no ends or interests whatever but those common to all who cultivate the science of medicine. Its columns are open to all those who wish to express their views on any subject coming within its legitimate sphere.

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All communications must bear the name of the sender (whether the name is to be published or not), and should be addressed to Editor Philadelphia Medical Times, care of the Publishers.

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EDITORIAL.

CREMATION.

THE question of the advisability of burning the dead is still everywhere the subject of active discussion, and the process appears to be growing in favor. In March of this year there were in Zurich two public meetings of about two thousand persons, for the consideration of the propriety of the adoption of cremation.

The speaker who opened the proceedings at these meetings called attention to the progress which the idea had already made in Switzerland, and stated that in several of the other cantons meetings had previously been held, and that in Bâle several orthodox clergymen had given the idea their approval, owing to the pressing need for all the room that could be made available in that small district. One of the medical professors of the High School then stated the danger to which Zurich especially was exposed. The cemeteries of that city are situated upon hills and cliffs under which lie the dwellings of the inhabitants, and from which the drainage enters into the springs at their base.

Measures were taken at the close of the meeting to form an association to discuss the question, and to ascertain the most suitable way in which a corpse could be burned. Numerous persons of varied social position became members of the society, which numbers over four hundred persons, and agreed that at their death their bodies should be burned. In this canton no opposition to this mode of disposal of the dead is looked for from the authorities. Similar associations

with the same object have been formed in other cities of Europe, in Berlin, Dresden, and quite lately in Vienna, and in the last-named city the authorities have directed an engineer to construct a furnace suitable for the purpose of burning the dead. In London, cremation appears to be a favorite theme with pulpit-orators, some favoring, some decrying it. In the same city a Cremation Society has been formed, and advertises in the *Athenæum*.

According to the *Medical Press and Circular*, a case of ante-mortem burial which occurred recently in France is about to become the subject of a judicial investigation, and will no doubt give a fresh impulse to the new movement. It is stated that about two years ago a young mother, shortly after the birth of her first child, was one evening seized with a fainting-fit, so severe as to be mistaken for death even by the physician, who, considering the great heat prevailing at the time, advised the inhumation of the body within six hours. This suggestion was unhappily adopted, but its frightful results only came to light the other day, when, the young widower having expressed his intention of marrying again, the mother of his dead wife claimed her daughter's body, intending to have it re-interred at Marseilles, where she resides. The vault was opened, and, to the grief and horror of all present, the coffin was found broken, and the corpse lying by its side, with hair and garments torn, and hands bitten through.

AS there are always persons ready to attach personal motives where they do not exist, and also to make personal applications where they are not meant, we want to state plainly that the Slowtown letters were admitted to our pages on the express understanding that they should not be personal attacks,—an understanding which, we think, has been carried out, at least so far as concerns the medical gentlemen connected with the canvass. The time seemed auspicious for calling attention to a source of grievous mischief, because the late very earnest, if not bitter, struggle had attracted general attention to it. The organization of our schools is to us about the worst conceivable: all the power being left in the hands of trustees,—self-elected,—representing nobody and responsible to nobody, having, moreover, themselves no direct interest in the schools, and being of very necessity ignorant of the wants of the profession and of the proper methods and aims of medical education. Is it a wonder that at least one trustee stated semi-publicly that one candidate was the best fitted for the place, but that he himself was going to vote for another on private

grounds? We may at some future day have more to say upon this subject, but the pressure on our columns renders present forbearance imperative.

CORRESPONDENCE.

NOTES OF TRANSACTIONS AT THE NEW YORK MEDICAL SOCIETIES.

TO THE EDITOR OF THE PHILADELPHIA MEDICAL TIMES:

SIR,—Among the matters of scientific medical interest recently occurring in our city may be mentioned the researches of certain gentlemen upon the cerebral centres.

Physiologists generally are aware that experimental researches have within a few years been made by Fritsch and Hitzig of Berlin, and Ferrier of London, with a view of proving the existence of, and of localizing, motor centres. Dr. George M. Beard, of this city, assisted by Dr. George B. Fowler, has also engaged in experiments upon the brains of living animals, having a threefold object in view,—namely, to ascertain how far the phenomena first observed by Hitzig and Fritsch, and subsequently by Ferrier, were demonstrable; 2, whether the objection of Dupuy and Canville to the conclusions derived from the German and English experimenters, on the ground that the current was diffused, was sound; 3, to push the inquiry still further, and by independent observation to settle, if possible, some of the questions suggested by the inquiry. The conclusions of Dr. Beard are—1. The living brain responds to electrical irritation, faradaic and galvanic. 2. There are in the brain certain different centres of motion, and probably of sensation. 3. The centres for the muscles of the mouth, neck, and legs appear to be in the anterior portions of the brain. The posterior portion is possibly the centre for special senses. Superficial irritation of the different parts of the cerebellum causes emprosthotonos; irritation of the tubercula quadrigemina causes opisthotonos; irritation of the hippocampi causes no visible reaction. 4. The brain in respect to these centres is symmetrical, and is indeed a double organ. 5. There is in the brain of a rabbit, in the posterior portion, about a quarter of an inch from the median line, a spot in each hemisphere that seems to be a centre for jumping and leaping movements.

Dr. Eugene Dupuy, before the Neurological and Electrological Society, May 18, conducted a series of examinations upon dogs and guinea-pigs, with a view to an examination of the theory of the existence and localization of motor centres in the cerebral hemispheres. The results of his experiments are embodied in the following conclusions. 1. That it is possible by exciting certain points of the cortical layer of the cerebrum to obtain contractions of every limb. 2. That as a rule the fore-limb of the opposite side is affected. 3. That the electric current must be propagated to the base of the cerebrum to excite either the nerves arising from it, or the

base itself, or the pons Varolii. 4. That if the dura mater be electrically excited contractions are obtained in the fore-leg, and generally in that of the opposite side. 5. The fact that the galvanoscopic frog is thrown into a state of contraction when its nerve touches some part of the cerebral mass far from the point excited, confirms the view that the electric current is propagated. 6. Contrary to the effects obtained by Ferrier, Dr. Dupuy has never been able to obtain effects upon the tongue, either of projection or retraction. 7. The whole cortical layer of the cerebrum is probably a centre of reflexion for a certain kind of sensibility capable of exerting a reflex action on motor or sensory nerves, but its preservation is not indispensable for the manifestation of voluntary or even intelligent action. 8. In the animals on which Dr. Dupuy has experimented, contractions of the opposite limbs can still be produced after the ablation of the optic and thalamic lobes and corpora striata of the side opposite to that to which the irritation has been applied. G.

NEW YORK, May 25th, 1874.

PROCEEDINGS OF SOCIETIES.

PATHOLOGICAL SOCIETY OF PHILADELPHIA.

THURSDAY EVENING, APRIL 9, 1874.

THE PRESIDENT, DR. WM. PEPPER, in the chair.

DR. CHARLES B. NANCREDE presented a specimen of *fatty tumor from the region of the scapula*, with photographs and microscopic slides, illustrating its structure, made by Dr. C. Seiler.

Dr. Nancrede read the following history and remarks: "The patient from whom this tumor was removed is a colored washerwoman, aged 37 years, who stated that she accidentally noticed the growth four years ago. It was then small, situated over the right scapula, just beneath the spinous process, was of slow growth, painless, and gave no inconvenience. During the past few months, however, its growth was quite rapid, with occasional stinging pains in the part, and considerable inconvenience caused by its extending down upon the posterior fold of the axilla. The patient had never received any injury to the part. I removed the tumor on the 19th of March, 1874, by the antiseptic method, in its entirety. In eleven days the patient was well, and, I believe that, had I had more faith in this method, the wound would have been soundly healed in half the time.

"I had determined to test the preservative influence of chloral on the first favorable opportunity, and accordingly placed the growth in a solution of about gr. xv of chloral to the ounce of water. It can be seen at a glance that beyond the ordinary maceration which any specimen must undergo in any fluid, there is no alteration or bleaching, for the small capillary vessels supplying the capsule can readily be seen. There is also no unpleasant odor. The microscopic preparations were taken after the growth had stood in the chloral solution some time. I think that most observers have been annoyed to find that after placing specimens in some one of the so-called preservative fluids they were useless for microscopic purposes. This objection evidently does not hold good with regard to chloral. The photographs taken by Dr. Seiler, aided by the specimens under the microscopes, show very beautifully the mode of growth of lipomata. The first

slide is a section of ordinary adipose tissue, and the extreme regularity in size of the component cells will be noted, with few or no interspaces at their angles. In the second, which is a section of the tumor, the great irregularity in size of the cells will be noticed, many being from one-fifth to one-fourth larger by actual measurement than those of normal adipose tissue, while many more are only one-quarter this size. In the third specimen,—mounted in Canada balsam, showing only the cell-walls,—in several places one of the smaller cells is seen situated between several larger ones, its walls much thicker, and studded at various points with masses of germinal matter. In many of the smaller interspaces will also be noted little masses of germinal matter stained deeply by the carmine solution, thus showing them to be newly formed. Owing to their great differences in size, the cells do not assume that comparatively regular pentagonal form seen in the first specimen, but tend to assume one more rounded. These appearances clearly indicate the mode of development of fatty tumors. In consequence of some irritation, there is set up a circumscribed proliferation of the connective tissue in some clusters of fat-cells. This is followed by a fatty infiltration of these newly-formed cells; and we thus have the explanation of the small cells arising between the large ones; for here at the angles the new germinal matter forms, which is gradually thinned out by the pressure of the fat within. This explains, too, the thicker walls of the smaller cells, which are younger, have less fat infiltrated into them, and therefore have their walls less stretched.

"I would now advert to the point of surgical interest in this case,—viz., the method of removal. I followed in its entirety Prof. Lister's method, but used, instead of his cere-cloth, Mr. Lund's antiseptic gauze. As this method has given rise to considerable discussion, and has been as heartily condemned as it has been praised, I will describe the steps. My instruments were all dipped in carbolized oil, made by adding one part of acid to nine parts of oil. The incision was made and the dressing completed under a spray of one part of the acid to forty parts of water, and the wound was closed with carbolized catgut ligatures and antiseptic adhesive plaster. Over the line of the incision several layers of linen steeped in the carbolized oil were laid, over this again the 'protective,' made by varnishing oiled silk on both sides and coating with starch, so that when dipped in the carbolized water some would be retained, and finally six or eight layers of the gauze and a pad of tow. On the third day the dressing was removed, and renewed under the carbolized spray, when most of the wound, which was between four and five inches long, was found to have healed by first intention. As I was a very lukewarm believer in this method, never having tried it, I left one angle of the wound open to allow drainage. Had I not done this, I think that I should have had union by first intention throughout the entire extent of the incision. During the time that the open part took to heal by granulation I do not think that there were twenty drops of pus discharged. Some of the catgut sutures I removed, others cut out, and one was partly absorbed, so that it came away as if the loop had been divided. Now, it is possible that I might have had this result by ordinary methods, but I certainly would have had more pus from the granulations, especially in a patient who warned me before the operation that former slight injuries had not healed readily. Nor is it likely that so large a wound, which from its position favored the collection of blood, pus, etc., would have healed in five days,—a result that I have no doubt I would have attained had I closed it entirely. I think, from the result of this case, and others in which I have adopted the method in part, that the reason it has so often proved unsuccessful is

because *all* the minutæ were not attended to. As to whether it is useful by excluding germs, as Mr. Lister originally thought, I do not pretend to know. Certainly the effects of exclusion of the air are well known, as in subcutaneous operations. The antiseptic method bids fair, in *some* way, to come nearer this than anything else that we know of at present."

The PRESIDENT remarked upon the apparently successful preservation of the color as well as the total absence of odor in the specimens thus preserved. The objection to all other preservatives, as chromic acid, bichromate of potassium, corrosive sublimate, and alcohol, lay in the fact that they either completely decolorized the specimen or added to it such intensity of color of their own that the original appearance could not be recognized. So, also, the shape was materially altered by these latter agents. There was less objection to solutions of arsenious acid on this score, though it possesses other objections in being deficiently preservative. He thought that the fact that chloral would permit the removal of specimens from the jars, and their examination, gave it extraordinary advantages.

Dr. R. M. BERTOLET said the objections to the use of this preservative fluid for preparations intended for microscopic study consisted in the fact that it did not harden the tissues placed in it.

Dr. JAMES TYSON had also used the chloral fluid for preserving specimens, and had recognized its deficiency in this respect. In other respects it answered well.

Dr. NANCREDE said that the sections exhibited of this tumor were hardened subsequent to their removal from the chloral fluid, and before the sections were made.

Dr. TYSON said that while the micro-photographs exhibited this evening were fair examples of their class, they presented the defects which he had always contended must attend attempts to photograph objects of any thickness whatever; that is, objects which required penetrating power and transitional focussing to bring out their points of structure. This could not be done, or at least had not yet been done with distinctness, in the micro-photograph. While he admitted, therefore, that photographs of very thin objects, as blood-corpuscles, might take the place of drawings with the camera, yet the latter, though immensely laborious, could alone supply the desideratum of an accurate picture when the object to be drawn presented any thickness.

Dr. F. P. HENRY presented a specimen of *cancer of the pylorus*, and read the following history: "The patient from whom this specimen of cancer of the pylorus was removed was an unmarried female, æt. 55, who had been under my care at different times for about four years. I first attended her in 1870, for rheumatism, from which she had suffered for more than twenty years. When I began to attend her she had been confined to her room for several years, being almost completely crippled by chronic rheumatism. All the joints had been affected, and the fingers were distorted so as to render them of little use. My efforts in the way of treatment were chiefly limited to relieving the acute exacerbations from which she frequently suffered, but, with the hope of achieving some more permanent success, and at the same time to remove the constipation, which was an important element in the case, I put her upon the use of Rochelle salts in drachm doses three times a day. Under this treatment she steadily improved, and in the summer of 1870 she descended the stairs for the first time in ten years. Whether this success was owing to the treatment or to the unusually warm weather of that year is of course an open question. This amelioration of the rheumatism was permanent. She remained free from any serious illness until I was called to attend her about the first of February of the present year. The symptoms at that time were

obstinate vomiting and constipation; but as she had been for a long time subject to transient attacks of acute indigestion, readily amenable to treatment, I at first anticipated nothing serious. The usual remedies not benefiting her, I began to suspect some organic trouble, and on palpating the abdomen I discovered a tumor about three inches to the right of and a little below the umbilicus, at about the junction of the umbilical and right lumbar regions. This tumor I proved to be disconnected from the liver by finding that there was tympanitic resonance on percussion between it and that viscus. It was hard, immovable, and somewhat tender. On pressure, pulsation was communicated to it from the abdominal aorta.

"As it was lower than we generally expect to find a tumor of the pylorus, the idea of a fecal tumor presented itself. The condition of the patient at that time was good: the pulse strong, and about 80. A pill containing two grains of aloes was administered three times a day, and on the third day operated freely three times, the discharges being fecal. The tumor was then examined, and no diminution in its size observed.

"Numerous remedies were employed to relieve the vomiting and nausea, among them the oxalate of cerium and the wine of ipecac in small doses,—the latter on the strength of Dr. Ringer's recommendation, in his work on Therapeutics. Neither of them was of the slightest service.

"The patient was seen by Dr. Howell, of Woodbury, N. J., in consultation, who, with Dr. Nancrede, was present at the autopsy. The stomach was found distended with fluid ingesta, and much below its normal position, the greater curvature descending more than an inch below the umbilicus. The pylorus was closed by a scirrhous thickening of its walls, but the resiliency of the tumor was so great that by using force the little finger could be forced through the duodenum. The thickening did not extend to the duodenum. The gall-bladder was distended with bile, and a large calculus could be felt through its walls. The microscopic examination made by Dr. Nancrede showed the characteristic fibrous alveoli of cancer crowded with large round cells. The specimen derives a further interest from the fact that it has been preserved nine days in a solution of hydrate of chloral, gr. xv ad 3i."

The PRESIDENT said that a point of unusual interest in connection with this case was the occurrence of carcinoma in a patient who had had rheumatoid arthritis. He did not remember ever to have met with the combination of carcinoma with this disease. He thought also that some writers on the subject of rheumatoid arthritis mentioned its tendency to exclude carcinoma.

Dr. W. G. PORTER presented, for Dr. J. G. ALLEN, a *calculus, bladder, ureters, and sacculated kidneys*, derived from a gentleman 76 years of age. Ten years ago, when in New York, he was suddenly seized with an attack of retention of urine, which was relieved by the catheter in the hands of an eminent surgeon of that city. The catheter was passed without difficulty, but the attack of retention was followed by cystitis, which laid him up for some time. Since then he frequently has had attacks of retention, and whenever an instrument was used for the relief of the patient, cystitis followed, although the catheter was always used carefully and by skilful hands. He thus acquired such a dread of all instrumental interference that of late years he would not allow a catheter to be used, and when he had retention he would go to bed and use opium suppositories until the urine began to dribble away. During all this time he suffered more or less from increased frequency of, or difficulty in, micturition; and finally died during one of the attacks of retention, with the bladder unrelieved.

Post-mortem.—On opening the abdominal cavity, the

distended bladder was found reaching about an inch and a half above the umbilicus, and uniformly adherent by its anterior surface to the abdominal wall. The adhesions were evidently not of recent formation; most of them were separated with some difficulty by the finger, some few bands requiring division with the knife. On opening the bladder, a large quantity of extremely ammoniacal urine escaped, and a calculus about the size of a walnut, weighing three drachms, was found; it was extremely rough and irregular on its surface, dark in color, and presented the appearance of what is known as a "mulberry calculus." The bladder was thickened, enlarged, and its interior surface was excessively ribbed. The prostate gland was very much hypertrophied, particularly its third lobe. The ureters were much enlarged and distended with urine. The left kidney was a mere membranous bag, containing urine, none of the secreting structure of the kidney apparently remaining. The right kidney contained a large cyst.

Dr. J. H. PACKARD asked whether there had ever been an attack of nephritic colic.

Dr. PORTER replied that the existence of stone had not been suspected.

The PRESIDENT said he hoped this specimen would elicit from the surgeons present some remarks as to the propriety of emptying the bladder by aspiration. He thought that, especially in consequence of the adhesions between the anterior wall of the bladder and the abdominal parietes, there would not have been any serious consequences in this case.

Dr. PORTER said that aspiration had been suggested in this case, but not tried. He had had experience in one case in which he had aspirated the bladder during his last term of service at the Presbyterian Hospital. The man had a very tight stricture, in which he could introduce no instrument, and after failing to catheterize he aspirated the bladder above the pubes. On the first occasion the relief was so great that the patient went to sleep during the operation. It was followed by no bad symptoms, and he was removed to the hospital the next day. After again failing to introduce the catheter during etherization, he again aspirated, with like good results. The next day, under the use of opium suppositories, the urine began to dribble away, and the man was so relieved that he eloped from the house, and had not been heard of since.

Dr. PACKARD said that he had had no personal experience with aspiration for the relief of retention of urine, but thought there was abundant testimony to its value, such as that given by Dr. Porter. He would like to ask whether the fact that catheterization, even performed with the greatest skill and care, was invariably followed by severe cystitis, would not have justified the suspicion of vesical calculus, in addition to the prostatic enlargement. It might seem as if a stone of any size would be apt to be detected accidentally, by the catheter striking it; but this would readily be prevented by the stone lying in the bas-fond of the bladder, behind the swollen prostate.

Dr. JOHN ASHHURST, JR., said that he had no personal experience in the use of the aspirator in cases of retention of urine, but believed its employment under such circumstances to be both safe and effectual. He should not, however, be disposed to resort to aspiration in any case in which, as in the present instance, catheterization could be readily effected. He did not think that the frequent recurrence of cystitis would necessarily lead to the suspicion that a calculus was present, for in cases of enlarged prostate, such as this, the bladder was seldom entirely emptied, and a condition of chronic cystitis, with vesical catarrh, was commonly set up,—a condition which would readily be converted into one of acute cystitis by very slight causes. Dr. Ashhurst

hoped that the stone found in this case would be submitted to careful examination; for, while its general appearance was that of a mulberry calculus, one of the phosphatic variety would be more naturally looked for in a case of urinary retention from prostatic enlargement. If, as was probably the case, the stone contained both phosphates and oxalate of lime, it would be interesting to know the proportions in which its several constituents were present.

Dr. PACKARD said that in the first volume of the Society's Transactions would be found a drawing of a stone of this character. The specimen was presented by Dr. J. Darrach, now of Germantown.

The stone was referred for analysis to a special committee consisting of Drs. Porter, Isaac Norris, and Hare, who reported May 28, 1874, as follows:

"The committee to whom was referred the chemical nature of the calculus exhibited at a stated meeting of the Society, would report that it is of the variety known as the mulberry calculus, and consists principally of calcium oxalate. Externally it presents the usual warty character, stained with blood, and is exceedingly hard. Before the blowpipe it is converted into a carbonate, and finally into lime. It dissolves in hydrogen chloride aided by heat, and more readily in hydrogen nitrate, and gives with the spectroscope the characteristic orange and green lines with the purple band in the more refrangible part, and with the liquid tests the usual reactions for a calcium salt. The presence of oxalic acid is also shown when boiled with potassium carbonate and the whole neutralized with an acid and a soluble lime salt added. All of which is respectfully submitted, and the committee ask to be discharged. Dr. Hare concurs in the above."

Dr. J. H. PACKARD presented the *viscera* obtained from the *autopsy* in the case of Mrs. T., who died four weeks after an amputation of the breast for cancer, the wound being almost completely healed. The death was preceded by about half an hour of increasing dyspnoea, she having been previously in perfect health in this respect.

Heart fatty; valves normal; aorta entirely free from atheromatous deposits. The heart was full of liquid blood, as were also the aorta, vena cava, and blood-vessel system generally.

The pulmonary arteries were full of firm clot; that in the right branch being firmer, and occluding the vessel more completely, than that in the left. On the right side the clot was traced through several successive ramifications of the vessel into the middle lobe of the lung. On the left side it was less extensive, and tended towards the lower lobe of the lung.

Lungs everywhere crepitant; perhaps somewhat emphysematous in the lower lobes. Old cicatrices existed at both apices, and in the left lung there was a very small hardened tuberculous deposit.

The bronchial glands were much enlarged, and full of carbonaceous matter.

Liver in a very early stage of cirrhosis. *Gall-bladder* much thickened, and lobulated (or contorted?); quite white.

Pancreas irregularly thickened,—in some places hardened, and in others so soft as to tear readily.

Spleen quite diffuent; a thick sheet of white lymph over its anterior surface.

Left kidney and suprarenal capsule normal; right not examined.

The seat of the operation-wound was found almost entirely healed, and the neighboring tissues perfectly sound, and free from appearance of disease.

The explanation of the fatal result in this case seemed to be that, from some trifling exertion, the weak and fatty heart "slowed" its movements, when coagulation began to take place, especially, or perhaps only, in the

pulmonary artery, where the current was less forcible than in the aorta. The slight obstruction thus produced would still further embarrass the feeble right ventricle, and this circumstance would favor the closer blocking of the vessels. Hence, violent respiratory efforts would ensue, the blood not having access to the aerating organs, and death was the result of mechanical asphyxia.

Dr. PACKARD called attention to the fact that in this patient, the subject of cancer, there were evidences of the former occurrence of tuberculous deposit in the cicatrices at the top of each lung.

The viscera were referred to the Committee on Morbid Growths for further examination, who reported May 7, 1874, as follows:

"Your committee found in Dr. Packard's specimen a large-sized gall-stone impacted in the ductus choledochus, where it had caused the lining membrane to ulcerate. The portion of the tube lying in front of the foreign body was pervious, although its mucous membrane was very much swollen and congested. The gall-bladder itself was contracted, and contained a small quantity of thick, dark, grumous bile; its walls were covered with a layer of fat half an inch in thickness. The head of the pancreas was found very much indurated, and somewhat increased in size. This was found upon examination to be due to an excessive development of connective tissue between the normal secreting parenchyma."

MEDICAL SOCIETY OF THE COUNTY OF ALBANY, NEW YORK.

SEMI-MONTHLY MEETING, MARCH 25, 1874.

THE PRESIDENT, DR. JOHN SWINBURNE, in the chair.

THE name of Dr. C. S. Merrill was proposed for membership, and referred to the appropriate committee.

Dr. ISAAC DE ZOUCHÉ read an elaborate paper on the subject of Hygiene in Relation to Hospitals. [We have space for only a few of his points.] In appropriating an old building for hospital purposes, or commencing a new one, the question of the greatest importance is that thorough drainage and sewerage be provided for at any cost. A soil saturated with moisture, even though it be from pure water, is a fruitful source of fever. If such is the result from the presence of moisture from pure water, how much more fatal the results when sewerage is allowed to collect about foundations, tainting the air and poisoning the water,—as it were, offering a premium to the angel of death to abide there!

In constructing a new hospital there would seem to be no excuse for overlooking such vital points, and yet the German Hospital in New York was built on a site which included an old drainage-stream. Malarial poison from this source so universally affected the patients that it was in serious contemplation by its trustees at one time to abandon its use for hospital purposes. So universal was the fact that patients entering it contracted malarious disease, that it became the ordinary practice to administer quinine to its inmates as a prophylactic immediately upon their admission.

Blood-poisoning is another form of the various manifestations of defective ventilation.

The walls and ceilings may be whitewashed a dozen times a year, and you may spend a fortune in the use of disinfectants, but the fact will force itself on you that every year, notwithstanding the great advance made in surgery proper, the proportion of fatal cases does not grow smaller, but the reverse.

The remedy seems to lie in the establishment of hospitals beyond city limits, where a large amount of space may be secured at comparatively small cost.

The building should be only one story high, with ventilation amply provided for at the apex of the roof; undoubtedly the pavilion-plan is the best. Such a plan has been carried out at Leipsic, as I learn by an admirable article in the *New York Evening Post* of March 23. At the gates of Leipsic there is an immense shed-hospital consisting of fourteen large "sheds," if such a name can be given to what are really handsome pavilions. They are detached, one-story, substantial frame buildings, filled in with brick, connected through an ante-chamber by a gallery, and facing a garden. They are one hundred feet by thirty-two feet in size inside, with a height of fifteen feet to the eaves and of twenty feet to the roof-ridge.

They stand sixty feet apart, are raised on stone piers four feet higher for the sake of ventilation. There are also ridge-ventilators, with movable sashes to furnish protection from cold during a part of the day in winter. Each "shed" has twenty-four beds, with nurses' room, baths, kitchen, and closets complete. There are isolated sheds for contagious diseases. No lying-in women are admitted. During twelve months, from August, 1872, to 1873, Professor Wiersch, who has direction of the surgical clinic, performed two hundred and sixty-six serious operations and did not lose a case from pyæmia, while prior to the construction of the pavilions, in the old stone hospital, which is now the central building, he lost from forty to fifty amputations from this cause annually.

The more space for free circulation of air our hospitals can secure, the nearer we can come to the Leipsic model, the better will be the economical and sanitary results.

Dr. D. T. CROTHEN then read an elaborate paper on Inebriation, its Pathology and Treatment.

[This is also crowded out of our columns.]

REVIEWS AND BOOK NOTICES.

OUTLINES OF COMPARATIVE ANATOMY AND MEDICAL ZOOLOGY. By HARRISON ALLEN, M.D. Second Edition. J. B. Lippincott & Co.

The success of this brochure of Prof. Allen is a very favorable indication of a growth in desire for abstract science somewhere in America; unless, indeed, as may have been the case, the book has sold largely abroad. These outlines bear about the same relation to an expanded work upon the subject, that pemmican does to good beef,—everything there, but everything reduced to the lowest state of condensation and dryness; the strength preserved, but the attractiveness to the palate reduced to a minimum. The book would have been a perfect godsend to the redoubtable Gradgrind, for, excepting the dictionaries, there are more facts in it than in any other book near its size we know of in the language. In the space of one hundred and thirty-six pages of not very fine print is contained almost everything about comparative anatomy worth knowing. To those coaching for an examination, the book, it seems to us, would be invaluable; and we can also highly commend it to any one who wants a brief but succinct and a cheap but satisfying work of reference upon the subject of which it treats.

M. PANAS has used solutions of "chloride of lime," or chlorinated water, very successfully in the treatment of varicose ulcers. The solution is applied on lint, and renewed frequently until healthy action is set up, when epidemic transplantation may appropriately be performed to hasten cicatrization.

GLEANINGS FROM OUR EXCHANGES.

DOUBLE DIAPHRAGMATIC RUPTURE AND HERNIA (*New York Medical Journal*, April, 1874).—Dr. John M. Woodworth reports the case of a man who was suddenly attacked with severe pain of a colicky nature, in the region of the umbilicus, exacerbating at intervals. His pulse was slightly accelerated; there was no vomiting; two grains of quinia with one-fourth grain of morphia gave immediate relief. On the evening of the same day his symptoms were those of an acute attack of pleurisy; sharp pain located in the left side about the eighth rib, impaired respiration, little cough, full, rapid pulse, and moist skin. He was given morphia hypodermically, and a mixture of calomel, jalap, and Dover's powder. The next day he felt better, took some Rochelle salts and castor oil, and had a copious discharge from the bowels. The following day the pain still remained; there was dullness on percussion over the whole left chest, with the exception of the seat of pain, which was resonant. The day after, he was suddenly seized with nausea, vomited slightly for the first time, and then lay down and died.

At the post-mortem examination, there was found a double hernia of the intestine and omentum, through a double rupture of the diaphragm to the left of the œsophageal opening. The left lung was completely collapsed; sections from it would not float. Ten days previous to his death, he had been engaged in pushing heavy planks up a steep gangway, having their weight full against his abdomen. He had felt a sudden snap inside, and had then felt faint, but had soon gone to work again.

THE TREATMENT OF SYPHILIS (*The Lancet*, April 25, 1874).—Dr. Spender has arrived at the following conclusions from his experience in the treatment of syphilis.

1. In the second or exanthematous stage of syphilis, it is almost always useful to administer mercury and iodide of potassium simultaneously. Ten grains of the iodide, with a grain and a half of gray powder or blue pill, should be given three times a day.

2. The "intermediary squamous syphilides" are best treated with perchloride of mercury, which should be given in compound tincture of cinchona.

3. The early tertiary symptoms of syphilis are often strikingly relieved by the soluble iodide of mercury, or rather by that double compound of iodine and mercury, which is formed by adding iodide of potassium to a solution of perchloride of mercury. It is impossible to praise too highly the therapeutic qualities of this medicine.

CURES FOR THE OPIUM-HABIT (*The Peninsular Journal of Medicine*, April, 1874).—Professor Albert B. Prescott, of the University of Michigan, has examined three of the various articles advertised as infallible cures for the opium-habit. The first was a pink liquid containing meconic acid and narcotina, but no morphia, and was therefore essentially opium with the morphia taken out. The second and third were colored and flavored solutions of sulphate of morphia, on which the proprietors made immense profits.

OFFICIAL LIST

OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U.S. ARMY, FROM MAY 26 TO JUNE 1, 1874, INCLUSIVE.

SURGEON JOHN MOORE, and ASSISTANT-SURGEONS J. J. WOODWARD and J. S. BILLINGS, directed to attend the Annual Meeting of the American Medical Association at Detroit, Michigan, on June 2, and on its adjournment rejoin their proper stations. S. O. 118, A. G. O., May 28, 1874.

SATURDAY, JUNE 13, 1874.

AMERICAN MEDICAL ASSOCIATION.

WE are indebted to Dr. William B. Atkinson, Permanent Secretary, for copies of the *Detroit Free Press* containing a semi-official report of the American Medical Association, and offer our readers the following epitome.

FIRST DAY.

The Association met June 2, at Hough's Theatre, Detroit, at half-past eleven, Dr. I. M. Toner, President, being in the chair. After the opening prayer by Bishop McCoskry, Dr. William Brodie made a very neat speech of welcome, in which, *inter alia*, he stated that when the Association first honored Detroit with its presence, eighteen years previously, the city numbered only forty thousand inhabitants; but now it boasts of a population of one hundred thousand, of a city hall that cost \$600,000, and of a system of sewage so complete and so supplemented by other hygienic appliances and regulations that the mortality of the city in 1873 was only two and a half per cent.

After the completion of this address and the announcement of the programme by Dr. Brodie, Chairman of the Committee of Arrangements, the question of disputed seats raised in regard to several delegates was referred to the Judicial Council, and, on motion of Dr. Brodie, a number of members of the profession from Canada were unanimously invited to take places on the floor. President Toner then delivered his address, which contains much that is of interest, but is scarcely fitted for abstraction. We have failed to perceive any especial central idea in it, unless it be that of the necessity of progress, of the need of a first-class endowed physiological and pathological laboratory somewhere in the country, and of the general interest which the profession ought to feel in fostering original work.

Section One.—Practice of Medicine, Materia Medica, and Physiology. Dr. Bulkley, of New York, read a paper on "The Management of Eczema," in which he treated at considerable length the various forms of local and constitutional cutaneous diseases. Among the remedies applied by him in his practice, with varied failures and successes, were arsenic, glycerin, cod-liver oil, tar-oilment, mutton-suet and lard, carbolic acid, and a solution of tar, water, and caustic potash.

In reply to a question, Dr. Bulkley stated that he had administered a one-grain pill of carbolic acid before breakfast, gradually increased to four or five grains daily. He had not used carbolate of iron.

Dr. Farnsworth, of Iowa, then read a long paper on "Ammonia," most of which is only of interest, first, as showing how much easier it is to speculate and reason than to work out new facts in the laboratory; secondly, as revealing of how little permanent value work of the former kind is when done. Although ammonia is in so frequent use, we have almost no positive knowledge as to its action, and Dr. Farnsworth's paper throws no light on the subject.

The clinical portion of Dr. Farnsworth's paper is of more interest, although containing little of real novelty. We extract the following from it:

"In a case where respiration was suspended during the administration of chloroform, I injected three drops of aqua ammoniæ, diluted with water, into the subcutaneous tissue of the arm. The patient rallied at once, and complete recovery took place. In a case of bronchitis in a debilitated patient, an opiate had been incautiously given; the secretions were suspended, and asphyxia seemed imminent. Five drops of aqua am-

moniæ, diluted with a drachm of water, were injected under the skin. The effect was immediate. The circulation was aroused, a large quantity of mucus was discharged from the lungs, and the arterial color of the circulation restored. The patient recovered under the continued administration of carbonate of ammonium and the alcoholic stimulants. In two other cases of bronchial obstruction I have used hypodermic injection of ammonia with marked success.

"I was called, at four o'clock in the morning, to see a man who was laboring under symptoms of opium-poisoning. I found, upon inquiry, that he had taken somewhat over an ounce of tinct. opii at 10 P.M., by mistake for port wine. The extremities were cold, respirations from four to six per minute, pulse full, lips livid; was unable to rouse him to consciousness. Injected into his arm three drops of aqua ammoniæ. It increased the respirations and improved the color of the circulation. A second injection was given, other means of resuscitation were used, and the patient gradually recovered. In a case of shock from railroad injuries, with the pulse hardly perceptible, the stomach would retain nothing. Inhalations of chloroform were alternated with those of ammonia. The patient very soon came under the anæsthetic, and the crushed leg was removed. Reaction occurred very soon, and the patient made a good recovery.

"In the catarrhal bronchitis of children I have used inhalations of ammonia with good results."

After the reading of the paper, a vote of thanks to Dr. Farnsworth, and the reference of his article to the medical periodicals for publication, the section adjourned.

Section Two.—Obstetrics. There does not appear to have been anything of much interest before this section.

Section Three.—Surgery and Anatomy.

Dr. Dunlap read a well-written report of a case of *Enchondroma over the Sternum*, which it hardly seems necessary to reproduce here.

Dr. E. M. Moore then read a paper on the *Epiphyseal Fracture of the Humerus*, of which, and the subsequent debate, the following is an abstract.

Professor R. W. Smith has stated that separation of the humerus at the line of junction of upper epiphysis and shaft is not uncommon in early life. The head of the bone can be distinctly felt in the glenoid cavity; a slight depression is felt beneath it, the head remaining motionless when the shaft is rotated. A striking and abrupt projection is observed beneath the coracoid process, caused by the upper extremity of the shaft being drawn inward by muscular action. The shaft seldom clears the head, and hence the small amount of shortening. This projection is smooth and slightly convex in contrast to the irregular margin of ordinary fracture. The elbow projects but little from the side, and can be readily brought in contact with it. Pressing the upper end outward while holding the elbow to the side and making extension and counter-extension, the deformity disappears, to recur as soon as left to unopposed muscular action.

Diagnostic points are, first, the projection beneath the coracoid, and second, the immediate recurrence of the deformity when the means for reduction cease retaining the shaft in place, there being no fracture of the superior end of the humerus in which retention is so difficult. In general the true nature of the injury is unrecognized, although the symptoms have been clearly stated by Sir A. Cooper and Professors R. W. Smith and Frank H. Hamilton. This arises from no accurate conception of the change of position having been put forth, and no method securing precise retention having been proposed, in so far as he (Dr. Moore) was aware.

The symptoms of this fracture are striking and uniform. The shaft of the humerus is so inclined as to carry the elbow a little backward and outward, while the superior end of the shaft is brought forward so as to make a prominence less rounded than the head, and lower down. It is usually found an inch and a half (at the age of 12 or 14) below the acromion, and near the coracoid process. The curved line from the acromion down to the projection has a long sweep instead of the small sphere of the natural head. This appearance is pathognomonic, and may be safely trusted in diagnosis without insisting upon crepitus. As in other epiphyseal fractures, this is not clear and sharp, as when the fracture is of bone, but is muffled. When the arm is moved gently and without grasping the head, the peculiar lock of the surface is sufficient to cause the head to rotate, and thus the timid practitioner fails in getting his pathognomonic sign; but if the head be firmly grasped it can not only be felt in the glenoid cavity, but held sufficiently firm to get this muffled crepitus by rotating the humerus or by carrying the elbow inward, and thus rubbing the two surfaces on each other. In addition to these striking symptoms, we may add a shortening of half an inch or a little more. When the two shoulders are inspected from behind, the impression given is that of luxation; for there is a slight flattening of the shoulder produced by drawing the fibres of the deltoid a little forward. The breadth of the shoulder is also increased when seen in profile. The motions of the arm are somewhat circumscribed: the ability to carry it upward and forward as well as upward and outward is impossible much beyond a right angle with the body, but affects the rolling of the scapula so that the hand can be placed on the head.

Reduction is effected by carrying the arm forward and upward to the perpendicular line. Retention is effected by moderate extension while bringing the arm down by the side, maintaining this slight extension until dressings for the purpose of continuing it are applied. Swinburne's method fulfils the indications easily and perfectly.

Even if not restored, the arm soon becomes useful, and nature gradually rounds off the prominence of the diaphysis and elongates the capsule at the lower border, allowing the motion upward to improve.

Case 1.—John Duff, aged 14, fell, striking on the right shoulder. Seen two hours after by a well-instructed physician, who considered it a dislocation. Violent traction was made by two men, but when the extension ceased the deformity reappeared, although the supposed dislocation was supposed reduced. Next day sent to Dr. Moore. The bandage was worn four weeks. The restoration is absolutely perfect.

Case 2.—Nellie C., aged 16, fell from a tree, striking the front of the shoulder. Was seen by family physician, who recognized no displacement. Fourteen days later was seen by another of great eminence, with like result. A third thought there was luxation. He (Dr. M.) saw the patient seventeen days after the accident. After reduction, applied Swinburne's dressing, which was worn about two weeks. A year afterwards the result was found quite perfect.

Case 3.—Charles B., aged 6, fell on his shoulder. A physician, having diagnosed luxation, put him under ether, but found motion perfect without crepitus, and supposed the deformity resulted from ecchymosis. Dr. Moore saw him at the end of two weeks, when the deformity was more marked, the swelling having subsided. The boy was the subject of infantile paralysis during his second year. The shrunk muscles allowed of almost absolute demonstration. Adhesions broken up under ether, when the muffled crepitus was plain. Restoration reported perfect three months afterwards.

Case 4.—Michael M., aged 18, fell, injuring his left

shoulder. A physician supposed that a dislocation had occurred. Four days later, Dr. Little, of New York, observed the projection under the coracoid, but found scarcely any shortening. Under ether, slight extension removed it. Failed to reduce deformity. Dr. L. took the patient to Dr. Moore. Adhesions broken up under ether, and reduction effected. Three months after injury, the movement of the joint was perfect, except that he could not raise it so high as the other, but was still improving.

Dr. Moore had reduced two cases at the end of two weeks, but did not know whether it would be possible at the end of four. If adhesion had occurred, break it up if possible.

Dr. Hughes could not understand how this fracture was to be distinguished from fracture of the anatomical neck. Fracture at the epiphyseal line will give the symptoms, it is true, but, considering the attachment of the supra-spinatus, infra-spinatus, and teres minor muscles with the action of the biceps, he would expect the symptoms in fracture of the anatomical, and perhaps too of the surgical, neck. He had known a fracture of the surgical neck occurring four months before to be mistaken for dislocation. He doubted if reduction and retention could be effected with the ease asserted.

Dr. Keller explained that fracture at the epiphyseal line does not occur except during childhood and adolescence. He believed the method of reducing it to be original with Dr. Moore.

Dr. Robert Reyburn, of Washington, doubted the separation of the epiphysis so late as the age of nineteen, as mentioned by Dr. Moore as having occurred in a case of Dr. Hamilton's. The treatment of injuries at this part is difficult. Fractures of the anatomical neck should be capable of like treatment. He supposed fracture of the anatomical neck is what had really occurred, instead of at the epiphyseal line as supposed.

Dr. Moore explained that epiphyseal fracture could only occur before ossification has occurred, the age for which differs. From Sir A. Cooper's and R. W. Smith's report, he had supposed sixteen to be the limit of age, but Hamilton's case gives the symptoms at nineteen. Ossification may not be complete until the twenty-fifth year. During adolescence the epiphyseal line is the weakest place, and hence fracture is more likely to occur there. During this age suspect epiphyseal fracture. This fracture is not like any other, because it has a specific and definite line, while other fractures have an indefinite line through the anatomical or the surgical neck, or through the tubercles.

Dr. Hughes asked why this fracture is so liable to be mistaken for fracture of either neck.

Dr. Moore replied that when the bones are brought into place they are held there by the action and pressure of the muscles. The head rolls around, but does not produce the pathognomonic crepitus,—at best getting only a muffled crepitus. Again, we have mobility, not found in dislocations. The error in diagnosis occurs because the profession do not know what to make of it. The error should not be made, because of the prominent projection, and because the forces acting upon the fragments are uniform. We do not have this projection in fracture of either anatomical or surgical neck.

Dr. Atlee, of Philadelphia, asked the opinion of the chairman, Dr. Gross, who stated in reply his entire concurrence in all Dr. Moore had said.

Dr. Gregory, of St. Louis, asked whether necrosis of the articulation had occurred in a case mentioned which had been examined six months after, to which Dr. Moore replied in the negative.

SAYRE ON FRACTURES.

Dr. Lewis A. Sayre, of New York City, had been appointed to make a report on fractures, two years ago,

but was prevented by illness. He presented statistics taken from Bellevue Hospital, prepared by House-Surgeon Van Wagner. He had lately learned of actual cases really treated by what he had supposed to be the obsolete method of waiting nine days for the swelling of the soft parts to subside. Again, most authorities on fracture stated that in fractures of the long bones, particularly if oblique, we were to expect deformity. Some say it is quite impossible without it. He thought this wrong, and the sooner corrected the better. Statistics proving shortening should only be saved to be disentombed to assist in defeating suits for malpractice. The long bones keep the body in place. Fracture occurring, the muscles contract and produce distortion of the vessels and nerves, the ends of the fragments causing irritation and inflammation. All that is necessary in any fracture is extension and counter-extension in the right direction, so as to have accurate adjustment.

Again, a fracture should be reduced as soon as you reach it. In all long bones it can be done with ease by extension and counter-extension. There was no vacuum in the thigh, for example, and if the femur was removed it would leave the mould of its form there if sufficient extension and counter-extension were made with perfect accuracy of adjustment. He illustrated by a very simple apparatus of wood and india-rubber cords the operation of the muscles upon the fractured bones. This idea he had got from Dr. Swinburne, of Albany.

If extension greater than normal be made, it would cause reflex contraction and irritation; but if only enough for adjustment, all was quiescent. After adjusting it we may have just enough fixation for accurate retention. Again, we must not wait for the subsidence of the swelling of the soft parts. Gutta-percha, as a means of retention, should be done away with, because of the foul odor produced, but we might use starch bandage, plaster of Paris, or leather. In compound and complicated fractures the principle is the same,—even in the extreme case of severe mangling from railroad injury. With perfect adjustment we have no pain. We can also send them into the open air. If the treatment be fairly applied, we have no shortening. In point of fact, it should be longer by the thickness of the matter between the ends of the fragments. Of one hundred and fifteen cases treated in Bellevue, some are longer, some without shortening. Many have the sixteenth or the eighth of an inch shortening. Excluding three cases, one of which had two inches, the second one and three-quarters, the third one and a half, these cases suffering respectively from abscess, delirium tremens, and pneumonia, and, being kept horizontal, had permitted shrinkage and hence shortening—excluding these, a very highly favorable average had been obtained.

Dr. Hodgen, of Missouri, objected that if a thigh be placed in the plaster of Paris splint in the straight posture, the muscles on the back of the thigh will be tense and those in front lax. We cannot bring *all* the muscles to a state of normal extension at the same time, and hence a position in which there should be no reflex irritation would be marvellous. In general, spasmodic contraction would occur. Dr. Sayre has said it does not matter what means are taken, so we succeed. But what means are we to use? Again, he says, do not make it too long! Now, the calcareous matter at the end of the fragments would soften and tend to produce shortening. If a fracture be oblique, something more than plaster of Paris is needed; otherwise, not.

Dr. Sayre stated that he had said that extension and counter-extension should be made in the proper direction, and then on no side would any muscle be stretched. All he had claimed was that it was better to start out with the idea that we could secure perfect results rather than that we must necessarily have shortening. In fracture of the femur we are to have the

thigh-piece capable of being lengthened or shortened if treated upon the inclined plane. This was first accidentally ascertained by Dr. Nelson, of Lower Canada, where a lumberman had both thighs broken, and by chance had got upon a ledge of rock whose width was precisely the length of the thigh,—such being the relief of pain that the man had fallen asleep. Taking the hint, he made an inclined plane to suit the thigh, and had a perfect result at the end of two months. Dr. Nelson was then sued for the alleged malpractice of keeping his patient unnecessarily confined, and had to flee his country.

Dr. Gregory, of St. Louis, expressed his astonishment. He thought Dr. Sayre's results barely possible, and wanted further evidence. He treated his cases by extension and counter-extension, with all the perfection of adjustment possible with mechanical appliances. If he had seen fractures occur without shortening, he had forgotten it. He had seen young persons get well without shortening of the limb as a whole. We all know that we cannot get union of bones or soft parts without previous softening. There is necessarily some loss of material where there is inflammatory action. Inflammation always consumes some of the soft parts. A young person's getting no shortening might be accounted for by irritation; but he did not think an adult could get union without shortening. Again, precise adjustment was practically impossible: the reverse was all talk and might do to tell *students*. The new material used in repair *will contract*, even if the injury be the simplest cut in the finger. If fractured limbs are as long, it is to be accounted for by growth somewhere else. Plaster of Paris has the advantage of allowing patients to go about, but he thought the best results as regards proper length would be obtained by the use of extension and counter-extension. He thought plaster of Paris just as suitable in treating injury of the soft parts as of bones.

At this point in the discussion Dr. Brodie entered the room, and announced that the Mayor was in his room, waiting to receive the delegates.

On motion, the further discussion of this subject was made the special order for Wednesday.

The section then adjourned until Wednesday at 2.30 P.M.

Section Four, Medical Jurisprudence, met only to adjourn.

Section Five, Public Hygiene, was engaged in a long discussion upon the propriety of petitioning Congress to establish a national health bureau, and finally decided in the affirmative, and also adopted the following resolution:

"*Resolved*, That, with a view to the establishment of a national sanitary bureau, it is expedient, at the present time, to press, through State medical societies and physicians everywhere, upon the legislatures of the several States, the importance of establishing State boards of health."

SECOND DAY.

The meeting was called at the Opera-House at 9.30 A.M. After the announcement of the Committee on Nomination, and the election of permanent members, several resolutions of no general interest were acted upon.

Dr. N. S. Davis then read the report of the Judicial Council. The report was adopted on the motion of Dr. Vandeman, of Tennessee. It stated that letters had been addressed to thirty or forty persons in different parts of the country, and of these only five expressed a decided dissatisfaction with the present code, whilst fourteen were positively opposed to the slightest alteration; an evidence that the great majority of the profession are satisfied with the code as it is.

After a careful examination of the code, the Council is of the opinion that it expresses the ethical relations and duties of the profession as completely and concisely as possible.

In regard to specialties, the Council report is *verbatim* as follows:

"Then the code of ethics very properly makes no mention of specialties or specialists, but presents plainly the rules necessary for the maintenance of professional character as applicable to all. But we are asked, How, then, can those who wish to pursue a special practice make known their position to their brethren and the public? We answer that the title of Doctor of Medicine covers the whole field of practice, and whoever is entitled to that appellation has the right to occupy the *whole* or any part of the field, as he pleases. The acceptance of this honorable title is presumptive evidence to the community that the man accepting it is ready to attend practically to any and all duties which it implies. As all special practice is simply a self-imposed limitation of the duties implied in the general title of doctor, it should be indicated, not by special or qualifying titles, such as *oculist*, *gynecologist*, etc., nor by any positive setting forth of special qualifications, but by a simple, honest notice appended to the ordinary card of the general practitioner, saying, 'Practice limited to diseases of the eye and ear,' or 'to diseases peculiar to women,' or 'to midwifery exclusively,' as the case may be. Such a simple notice of limitation, if truthfully made, would involve no other principle than the notice of the general practitioner that he limits his attention to professional business within certain hours of the day. Neither could it be regarded as a claim to special or superior qualifications. To give the specialist any privilege beyond this would be to invest him with a special privilege inconsistent with the equality of rights and duties pertaining to the whole profession. We see no reason, therefore, for recommending any change in the present code of ethics in reference to this subject."

In regard to doctors bidding against one another for public services, the report says:

"The present code of ethics, while sanctioning a most liberal bestowal of gratuitous professional service to the poor, whether as individuals or in public charitable institutions, and in aid of the sanitary interests of the communities, yet expressly prohibits the bestowal of such services on well-to-do individuals, endowed, mutual benefit, or any kind of money-making institutions, societies, or corporations. It also expressly prohibits all attempts to attract attention and make merchandise of charity by ostentatiously parading before the public notices proffering services and medicine to the 'poor gratis.' We see no reason why this is not sufficient so far as relates to the regulation of gratuitous services. To govern the matter of compensation the code simply gives us the following general declaration: 'Some general rules should be adopted by the *faculty*, in every town or district, relative to *pecuniary acknowledgments* from their patients; and it should be deemed a point of honor to adhere to these rules with as much uniformity as varying circumstances will admit.' The aim appears to have been to allow sufficient variations in the rate of compensation to accommodate the varying habits and circumstances of different communities, and yet to bind each individual to an honorable compliance with the general rules established by his professional brethren. Such being the correct ethical principle, the difficulty consists in tracing and maintaining clearly its practical application. That the principle laid down in the paragraph just quoted is inconsistent with all contracts or agreements to attend individuals, families, companies, corporations, or any associations or institutions other than those of a strictly charitable character, for a speci-

fied sum per month or year, without regard to the amount of medical services that might be required in the time specified, no one can reasonably doubt. It seems to us equally inconsistent with the ethical rule to enter into a contract with a manufacturing company to attend their employés, or with a school to attend its patrons or scholars, for a fixed sum per annum, to be derived from the levy of a certain percentage on the wages of the employés or on the tuition-fees of the students; for, however plausible may be the humanitarian idea of securing for the employé and the student adequate medical attendance when sick at the smallest average cost, the practical working of the system violates both the rule that compensation for medical services should be in accordance with the kind and amount of services rendered, and that every individual and family should be free to choose their own medical attendant without dictation or indirect restraint.

"These observations do not apply to a certain kind of contract-service sometimes required in connection with the medical staffs of the army and navy, nor to the hospital-tax on sailors in the marine hospital system, for reasons too obvious to require mention. One other subject requires a few moments' attention. There is a class of public charitable institutions, such as county almshouses, orphan asylums, etc., supported by public taxation. In many of the States the public authorities having control of such institutions have annually asked for bids from the profession, offering to award the contract for professional services to the one who should bid for the lowest pecuniary considerations.

"While as charitable institutions any member of the profession might offer his services to such of the poor inmates as might ask for them gratuitously, yet the idea of asking members of the profession to bid against each other for the pay for public professional services is repugnant to every feeling of professional honor, and often productive of great injustice to the sick poor.

"The public authorities in all such cases should fix such just rate of compensation for the necessary medical services as they may deem best, and then appoint the best medical man who is willing to accept the compensation proposed. And we have no doubt but that a proper attention to this subject on the part of the profession would secure the necessary change."

The amendments of the plan of organization next came up. After considerable discussion, the following amendment was adopted:

Strike out the second paragraph of Article II., and insert the following:

"The delegates shall receive their appointment from permanently organized State medical societies, and such County and District medical societies as are recognized by representation in their respective State societies, and from the medical department of the army and navy of the United States."

Also, strike out the fourth paragraph of same article, and insert:

"Each State, County, and District medical society, entitled to representation, shall have the privilege of sending to the Association one delegate for every ten of its regular resident members, and one for every additional fraction of more than half that number. Provided, however, that the number of delegates from any particular State, Territory, county, city, or town shall not exceed the ratio of one in ten of the resident physicians who may have signed the code of ethics of this Association.

"The medical staffs of the army and navy shall be entitled to four delegates each."

All other amendments were laid upon the table.

The report of the Committee on the Memorial to Congress in regard to the army and navy staff rank

was then read by the chairman, Dr. Keller, and the following resolutions, after discussion, adopted:

"*Resolved*, That a committee of one from each State and Territory be appointed, with power to fill vacancies, for the purpose of memorializing Congress on this subject, and of securing the co-operation of the several State and County medical societies for the same purpose.

"*Resolved*, That Dr. J. M. Toner, of the District of Columbia, be chairman of said committee, and that the other members of the committee be appointed by the President."

Dr. N. S. Davis then delivered the annual address upon Practical Medicine. This, although containing food for thought, is long, and has not enough of novelty to warrant its reproduction. We extract, however, one paragraph, with the hope that the contributors to the *Philadelphia Medical Times* will never lose sight of the facts it embodies:

"My object is simply to attract your attention to what has appeared to me the strongest barrier in the way of genuine progress both in the science and art of medicine, namely, incomplete observation of facts, deductions from inadequate premises, and the constant use of mere theoretical assumptions or suppositions as though they were demonstrated facts. It is the indulgence of these practices that actually keeps one-half of the professional observers busy in correcting the errors and disproving the assumptions of the other half, and fills our literature with endless contradictions."

Dr. Gross's address on Surgery was confined chiefly to a consideration of the subject of prostitution, and has not been yet reported.

Section One, Practice of Medicine, Materia Medica, and Physiology.—About a dozen members present. A report from the Committee on the Cultivation of the Cinchona Tree was read, and the committee continued, in accordance with their own request.

A very long and elaborate article on The Mechanism of the Encephalic Circulation, by Dr. Reuben A. Vance, of New York, was read.

Section Two, Obstetrics.—A paper upon the Inverted Uterus, by Dr. Bontecue, of Troy, New York, was read and referred to the Publication Committee.

Section Three, Surgery.—The discussion of Dr. Sayre's paper on Fractures was resumed.

Dr. Gregory declined speaking until later. The discussion was opened by Dr. A. Garcelon, Secretary of the Section, who spoke of the great practical value of the question to the profession, and said that while he thoroughly agreed with Dr. Sayre in striving to secure a perfect limb in cases of fracture, and also in aiming at a perfectly accurate adjustment, his own experience showed him the difficulty of succeeding in the latter attempt, and he believed that *no distinct and definite rule* of treatment could be laid down which would show such a series of results as were given in the statistics submitted by Dr. Sayre, for they show a most wonderful absence of shortening. The speaker wished to know how one could learn to measure a limb with absolute accuracy. He said he had been present at many malpractice trials, and had found the opinions of the best surgeons differing materially. When he was a student he was taught to measure through the median line, commencing at the sternum and thence downward over the navel. If one applies the measure to the trochanter, how can one be certain of a satisfactory result? In oblique fractures, how are surgeons to extend and arrange the broken fragments so as with certainty to replace them precisely in their original positions? and if they succeed in that, how shall they keep them there?

In the femur and other long bones, how can the results indicated in the report be obtained? If the position taken by Dr. Sayre is accurate, then the medical profession have much to learn, and the public much to complain of.

Dr. M. Waterhouse, of Wisconsin, asked Dr. Garcelon how he would ascertain with perfect accuracy whether a fracture was oblique or transverse.

Dr. Garcelon said he did not know in cases of doubt; but that when he used the word oblique in this connection he meant that the ends of the bones should slip past and overlap each other. He stated the case of a girl who was of such constitution that he feared to apply the usual dressings to her fractured femur, and whom he had placed upon a flat bed, using the pulley only, and had obtained a successful result.

Dr. Sayre asked how he had kept her from slipping down in the bed.

Dr. Garcelon answered that he had taken no means at all, and had used no counter-extension.

Dr. Sayre said he had seen this done in cases where, by raising the foot of the bed, the body acted as a counter-extension, but he had never seen it on a level bed.

Dr. Chapin, of Grass Lake, said he had known similar cases to be successfully treated on a level bed.

At this stage of the proceedings, Dr. Plummer, of Illinois, read a letter from Dr. Truesdel, of the same State, transmitting a diagram of a fracture-bed, which is merely a triple inclined plane, in which both limbs are equally inclined, and extension is produced by the use of cog-wheels and a ratchet. He stated that for four years he had used these beds with the most gratifying results; that the members of the profession in his section of the country used them and liked them, and that they were not patented articles.

The original question was resumed by the chairman, who said he used in preparing his bandages a solution of silicate of potash and silicate of soda, to which he gave a preference over plaster of Paris, and a decided preference over starch, to which he was strongly opposed. He said it dried very rapidly. On the main question as to whether there was necessarily shortening in oblique fractures of the femur, he was in favor of the view that a certain amount of shortening was necessary.

Dr. Reed, of Ohio, thought that in every case there must be shortening, and he took the ground that in cases of apparent absence of this defect nothing could be known to a certainty. He never yet had seen a skeleton in which the corresponding bones had been perfectly equal in length, nor one in which the difference had been less than one-sixteenth of an inch. Even the text-books are not correct on this point, and in Horner's Anatomy the statement in the text says the corresponding bones on opposite sides of the body are equal, while a foot-note contradicts it.

Dr. Whiting, of Wisconsin, had been surprised at the position taken by Dr. Sayre; and the idea that the theory of the necessary shortening of the long bones in cases of oblique fracture was exploded, alarmed him. With the records of the profession for the past fifty years before them, practitioners had no right to expect such results as those reported from Bellevue Hospital; and if he was compelled to accept the theory, he would, in self-defense, be compelled to retire from the profession.

Dr. Quimby, of Jersey City, did not believe that any surgeon thought himself able to restore ten fractured femurs in a hundred to their original length; that an absolutely accurate measurement was practically impossible, and it is scarcely ever that one finds an exact restoration. The proposition of a perfect cure seemed to him too absurd to require remark. He had seldom seen a case of less than one-half inch shortening.

The speaker adverted to the danger of suits for malpractice, and cited a case in which he knew that a brother-practitioner had narrowly escaped a suit when the difference between the length of the limbs was only one and one-half inches. He said the limb might have been the shorter of the two before the accident, and cited the instance of his own child, in whom, without any perceptible limp, there was a natural difference of one-half inch in the length of the limbs.

Dr. Hughes, of Iowa, thought there were but few present who would agree with Dr. Sayre. He did not question the veracity of the statistics, but if they were true he considered them simply wonderful. He would be glad to hear what Dr. Sayre could advance in support of his position.

Dr. Waterhouse, of Wisconsin, said that if these statements are true, and these figures accurate, we should face the situation, and let the danger of suits come.

There is a reason for this unheard-of success at Bellevue in the appliances at hand, and the constant attendance and care available which country practitioners can never enjoy; and suits for malpractice are generally brought in the country. Backwoods doctors scarcely ever have proper appliances, and cannot possibly give cases constant personal care. The speaker said that he had himself treated many cases in which, with better appliances, he could have produced better results than he had succeeded in doing. He spoke of the question of patients sliding down in bed, and stated that that was a thing which regulated itself, and that in a short time the hips of a patient would produce a depression in the bed which would prevent slipping.

Dr. Pierce, of Illinois, thought the facts should be known, and if surgery has made such advances it should be declared.

Literature in this profession is authority in courts of law, and the later the volume the more weighty its authority. This convention is making literature which will be evidence in the courts of justice, and it is important that that fact should be known. He was startled when he heard that the day of shortening had passed, for he had always had it in his practice. He was prepared to admit the absolute accuracy of the statistics from Bellevue Hospital, presented by Dr. Sayre, but he thought *the measurements were taken too soon*. They were taken when the patient was pronounced cured, while suits for malpractice are scarcely ever brought until after the lapse of months, and in his opinion *shortening goes on after discharge* and when the limb is in use. In one case of his own he was called in to treat the young son of an intelligent mechanic for an oblique fracture of the femur. He explained the whole matter with reference to the possible deformity to the father, who united with him in his efforts to prevent it. Frequent measurements were taken, and when the child was pronounced well there was not the least shortening to be discovered. Some time afterwards the boy was accidentally shot and killed. He was called in to make a post-mortem examination, and found that the bone was one and one-half inches shorter than it should have been, and that the ends had slipped and perceptibly overlapped. He took the bone, and now has it in his possession. He did not believe any patient could be induced to wear apparatus long enough absolutely to prevent contraction, and he thought the loss of only half an inch should be considered a good result.

In continuing his remarks, Dr. Pierce described and advocated the use of the "book" or "Bavarian splint," which is particularly adapted to fractures of the tibia, or of both the tibia and fibula, in which cases it is convenient and easily applied.

This splint can be made by any one who has two

pieces of flannel, a needle and thread, and some plaster of Paris, or the silicates already mentioned by Dr. Gross. The method of construction and application may be illustrated as follows. Place two pieces of flannel (long enough to reach the desired distance, and wide enough to envelop each other) upon each other, and stitch them together longitudinally through the centre, and they will then form four leaves. With two of these envelop the limb, and fasten them together on top, the seam being underneath: this is to keep the plaster case from touching the skin. Upon the other two leaves spread the plaster, and bring them together on top, moulding them to the limb, and when the plaster becomes hard there is a plaster box the exact shape and size of the limb, which can be opened at will, the seam at the back serving as a hinge. With this splint the limb can be looked at every day, and in case of swelling or shrinkage of parts a new one can be adapted to the changed condition. The use of this splint has been recommended in fractures of the femur, but Dr. Pierce had been afraid to try it, although for injuries below the knee he thought it unrivalled. It was recommended for use in compound fractures, a hole being left to allow the escape of discharges, but in such cases he, in his practice, used the fracture-box.

Dr. Sayre, of New York, said he was glad to have been the means of stirring up a discussion on this subject, but he saw he had been *grossly* misunderstood.

A voice.—"No reference to the chair, is there, doctor?" [Laughter.]

Dr. Sayre.—"The chair never misunderstands." [Applause.]

After this little episode the doctor said that he *knew* the statistics presented by himself to be correct; that Dr. Hamilton had made the measurements, and that he was a man who was so violently opposed to the theory that in his published writings he had denied the possibility of any oblique fracture being cured without shortening. For this reason he (Dr. Sayre) had asked him to measure the patients. He said that if seven successive cases should be presented he would agree to give up his opposition to the theory. He found the cases, and surrendered.

Dr. Sayre now turned and said, "Did Dr. Gregory say yesterday that it was impossible?"

Dr. Gregory answered, "Yes."

Dr. Sayre then said he was glad to have found an authority at last; that the reasons he had concluded to make a report were, as he stated on Tuesday, because he had heard of practitioners who clung to obsolete theories, and now he was glad to find that there had been a necessity for his doing so. He then read an article from the *Medical Journal*, signed by Dr. Hamilton, sustaining his position. He said the credit of the results at Bellevue is not due to the attending surgeons, but to the young men of the institution, who make the preliminary arrangements and have the care of the patients.

In reference to the Bavarian splint, he was opposed to opening or removing it to look at the limb. When a fracture is well adjusted, leave it alone.

The statements that accuracy of measurement was impossible, which had been made by some of the speakers, had astounded the doctor more than a little, and he called their attention to the accuracy of measurement by which the stones in the very building in which they sat had been measured and cut by one set of men and perfectly matched by another set.

Dr. Sayre then took up the mode of treatment he had advocated on Tuesday, produced his machine of wood and rubber, and briefly repeated his theory in regard to extension and counter-extension. He claimed that there is never irritation of the muscle when there is only normal traction. If there is only enough exten-

sion to produce a normal condition, then there is retention,—*fixation*. Too much extension is abnormal, produces irritation, and is often the cause of non-union.

Extension and counter-extension should be applied the instant of seeing the patient, and then—*fixation*. There are no circumstances when something cannot be found to effect this. Machinery is the curse of the profession, and there is scarcely a country doctor who has not in his office a lot of worthless and expensive machines called "surgical appliances."

In setting a limb, the assistant who holds it in position while the surgeon is applying the bandages is in the most responsible position. If there is a single continuous piece of skin (no matter how crooked or narrow) for a guide, then the limb can be put in position, be held by an assistant, and properly attended to.

The speaker said that in thigh-fractures he used the triple inclined plane. He disclaimed any desire to "lay down the law," and concluded by claiming that a discussion of this kind would not have the authority of a carefully-written book.

Dr. Pierce stated that in opening the Bavarian splint to look at the limb he removed only one leaf at a time, and that he had the limb held in position by an assistant; that he considered it important to look at the limb, verify adjustment, and see its general condition. He adhered to his statement as to the impossibility of making accurate measurements, and stated that he did not believe there were any seven men in the room who would agree on a measurement of the distance between the two entrance-doors.

Dr. Garcelon asked Dr. Sayre how he would treat a fracture of the thigh in a boy five years old; how he would find out if the length was right, and how he would secure health during treatment.

He said he also wished an opinion in another case. A young man, of 16 or 18 years, fell on the sidewalk and broke his arm; a competent surgeon set it, and said it was perfectly adjusted; a starch bandage was applied, and no pain was felt after the first day. On the tenth day the speaker was called in, found gangrene had set in, the soft parts sloughed away from the wrist to the elbow, the bones slipped, and amputation became necessary.

Now, what was the cause?

Dr. Sayre answered that with children treatment was difficult, but showed with slips of paper his method of disposing the little patient upon an apparatus formed with two boards so that the leg actually sets itself. Treatment with plaster is difficult, because children are so fat that shrinkage of the limb is certain, and it will rattle about in its plaster case like a pea in a box.

Dr. Garcelon.—"How do you keep the child from twisting about?"

Dr. Sayre.—"He finds out what hurts him, and it is an astonishing fact that children like to be comfortable."

Dr. Garcelon.—"What do you do in the case of an ununited fracture?"

Dr. Sayre.—"Rub the ends of the bones together, twist them around, and break things generally."

Dr. Sayre here, with the assistance of a gentleman whom he used as a subject, illustrated his mode of setting, extending, and "fixing" a fractured thigh, with the aid of a simple apparatus contrived by Dr. Figaro, a young physician at Bellevue.

Dr. Gregory, of Missouri, said, "I think I answered Dr. Sayre when I said yes. I say I think there is no such thing as a firm cicatrix without contraction." The doctor affirmed that there would be no such thing as healing without new matter; that there must be softening, and there must be loss of material from the incident inflammatory action.

He said he was astonished at hearing Dr. Sayre's remark about fearing displacement in case of removing

the Bavarian splint, and asked if he thought he could put plaster on any limb so tight as to prevent muscular action and contraction. There is no such thing as quiescence in the muscles; there is always tonic action tending to contraction. As long as the muscles live they will act, and will force the fractured bones to slip slowly past each other. He insisted that extension and counter-extension would not prevent this, in addition to the cicatricial contractions. He concluded by saying, "I again assert that the man who believes he has done it is simply mistaken. I think Dr. Sayre himself believes what he has said."

Dr. Lockford, of Missouri, wished to correct Dr. Sayre in a matter of fact. The system of treating fractures by flexion was inaugurated about the middle of the last century, and was once very popular. He then discussed the theoretical and practical difficulties of the question, and concluded by saying that he believed with Dr. Sayre that perfect cures can be effected, and that the profession should strive for perfection.

Dr. King, of Philadelphia, at the request of Dr. Sayre took the floor, and stated that he fractured his thigh over a year ago, and that now there was no apparent and only a very slight actual shortening of the limb.

The discussion was continued some time longer, after which Dr. King moved that Dr. Sayre's paper be referred to the Committee on Publication.

Dr. Quimby, of Jersey City, moved to substitute for Dr. King's motion the following preamble and resolution:

"Whereas, There seems to be some uncertainty in the minds of the profession in reference to their treatment of fractures of the long bones, therefore,

"Resolved, That it is the opinion of this section that it is nearly impossible to treat fractures without shortening."

The substitute was lost, and the paper referred to the Committee on Publication.

The Section of *Public Hygiene* had various papers before them, mostly not of sufficient interest to render necessary their reproduction here.

THIRD DAY.

The Association met punctually at 9.30 A.M.

After some business not of general interest, the report of the Committee upon the President's Address was received. *Inter alia* it urged the perfecting of the State and County organizations everywhere, an extension of the time of sitting of the Association from three days to four, and offered the following resolutions:

"Resolved, That in view of the lack of time in which to properly transact the business of the Association, an extension of one day is deemed advisable:

"Resolved, That the President appoint a committee of five, of which he shall be chairman, to elaborate a plan for the organization of an International Medical Congress, and report at the next meeting."

Suitable resolutions in regard to the death of the late Dr. Henry Miller were read and adopted.

Drs. S. D. Gross, of Philadelphia, J. M. Keller, of Louisville, and E. S. Gaillard, of Kentucky, were appointed a committee to prepare a memorial.

An appeal from the Boyle County Medical Society, of Kentucky, was read by Dr. Keller, and the following preamble and resolutions, after discussion, were adopted:

"Whereas, A most laudable effort has recently originated in the Boyle County Medical Society, of the State of Kentucky, and in the Kentucky State Medical Society, to create a fund for the erecting of a statue or some other suitable memorial in honor of Dr. Ephraim McDowell, 'the father of ovariotomy,' English writers to the contrary notwithstanding, who lived in the town of Danville, in the State of Kentucky, and who per-

formed in that town the first ovariectomy, in the year 1809;

"Resolved, That the American Medical Association most earnestly endorse the action of said County and State Societies, and as urgently commend the object to the generous consideration of the medical profession of the world."

After various discussions in regard to matters of more or less interest, Dr. A. Nelson Bell, of Brooklyn, New York, read an excellent address upon *The Waste of Life*, having an especial reference to New York and Brooklyn. In regard to that most diabolical of all the fruits of modern society, the New York tenement-house, Dr. Bell said,—

"The raid of the sanitary police in New York last year, in view of the expected cholera, discovered thousands of people actually living in holes in the ground, a dozen or more in a huddle, in holes nine or ten feet square, swarming with vermin, and rotten with disease—no less than twenty thousand of these *trogloodytes* living like moles and bats in the dark, poisoning the atmosphere around and sucking the life-blood of the people. In the tenement-houses of New York there are many single rooms occupied by from ten to fifteen persons of both sexes, and frequently by several families. There are structures from four to six stories high, divided into hundreds of rooms, crowded with men, women, and children, smothering for the want of fresh air, and in dirt and foul odors horrible to contemplate. And there are, not uncommonly, near to such buildings as these, adding to the stifling condition, yards which, with the gutters, are the common filth receptacles for the out-throwings and are the wallowing-places of the children; the streets, as filthy as the gutters, for the young girls, and rum-holes at every corner for the parents. And these tenement-houses are the homes of more than half of the children of New York. In them is carried on the perennial 'slaughter of the innocents' of more than two years old and under, in comparison with which the crime of Herod sinks into insignificance.

"Such surroundings obtund and destroy human sensibilities. The occupants of such dwelling-places become an easy prey to the sensual excitements of alcohol and other debasing agencies and influences. As people become accustomed to dirt, they cease to recognize its presence and to exert themselves to avoid it; there is no limit to the downward tendency. The same broad road to disease and death is the highway to moral degradation; and that such an institution should breed disease and death, that it should be the hecatomb of children, that it should sustain liquor-stalls by the thousand, and supply the ghastly gayety which flaunts beneath the gaslight and makes night hideous, that it should send the boys who escape the slaughter to State Prison—that the tenement-house should do all these things, and more than words can utter, is perfectly consistent with its appointments. And yet, to repeat, more than half of the children of New York are born in tenement-houses; but New York is called a Christian city."

We make the following extract also from this address:

"The total number of deaths in Brooklyn last year was 10,968, and not less than one-fourth of them were accelerated by defective drainage. And yet Brooklyn is no exception in this regard. On the contrary, the death-rate of Brooklyn compares favorably with other of our large cities, which is abundantly shown by the following examples: The total annual death-rate of Brooklyn from consumption last year was 3.47 per 1000 of population (census of 1870), and on the whole number of deaths the percentage for consumption was 12.55. In the city of New York, on an estimated population at the present of 1,000,000, there are of deaths from consumption 4.13 per 1000, and 14.22 per cent. of the total mortality. Boston, 3.96 per 1000 of population,

13.84 per cent. of total mortality; Philadelphia, 3.05 per 1000 of population, 13.65 per cent. of total mortality; San Francisco, 2.74 per 1000 of population, 14.12 per cent. of total mortality; Albany, 3.43 per 1000 of population, 15.50 per cent. of total mortality; New Orleans (where the benefits of a mild climate opposed to consumption are condoned by defective drainage), 3.96 per 1000 of population, 13.84 per cent. of total mortality. By States: of the total mortality in the United States, 12.45 per cent. was caused by consumption; in New York, 16.17 per cent.; District of Columbia, 21.19 per cent. A concise table of the ratio of the deaths from consumption in every State in the Union may be found in the 'Dictionary of Elevations and Climatic Register,' by Dr. J. M. Toner. Under approximate temperature, the ratio of mortality from consumption in regard to defective drainage will be found scarcely less deviating than miasmatic fevers."

After a vote of thanks had been tendered to Dr. Bell for his address, the Committee on Prize Essays reported that none, in their estimation, worthy of the prize had been offered. The report was accepted.

A communication from the Philadelphia County Medical Society was then read, inviting the American Medical Association to hold its annual meeting during the Centennial year (1876) at Philadelphia. The subject was referred to the next meeting of the Association.

The following gentlemen were then announced as having been appointed delegates to foreign bodies: R. J. Lewis, D. G. Brinton, T. M. Drysdale, Philadelphia; E. C. Howard, E. Seguin, New York; L. C. Law, California; J. D. Jackson, Kentucky; A. J. Erwin, Mansfield, Ohio; George W. Burton, Mitchell, Indiana.

A report from Dr. Seguin concerning his visit abroad as representative of the American Medical Association was next read. It related especially to an effort for harmonizing our means of observation and of record, and stated that the British Medical Association had ordered the printing of Dr. Seguin's address upon the subject before them, and that the French Association for the Advancement of Science had voted the nomination of a commission to arrange the preliminaries of an international agreement upon the subject. It concludes as follows:

"These considerations could be much enlarged. To save time, I cut them short, and conclude by asking the American Medical Association to form an international commission of physicians of high standing, speaking the European languages, and designing to go to Europe this summer.

"To charge them to represent the American Medical Association before the British Medical Association, the German and French Associations for the Advancement of Science, and other kindred societies; to promote interchange of ideas, and particularly to co-operate with them in any plan, scheme, or organization which would have for direct object the uniform establishment and propagation of the methods and instruments of positive observation. And, finally, to invite them to report on the progress of this work at the next meeting of this Association."

A proposal to amend plan of organization was submitted by Dr. Adams Jewett, of Ohio:

"First sentence of paragraph eight of Article II., p. 403 of Transactions for 1873, reads as follows:

"The *permanent members* shall consist of all those who have served in the capacity of delegates, and of such other members as may receive the appointment by unanimous vote, and shall continue such so long as they remain in good standing in the body from which they were sent as delegates, and comply with the requirements of the by-laws of this Association."

"I propose that this sentence be amended so as to read as follows:

"The permanent members shall consist of all those who have served in the capacity of delegates, and of such other members as shall have received the appointment by unanimous vote, and of all others who being members in good standing of any State or local medical society entitled to representation in this body shall, after being vouched for by at least three members, be elected to membership by a vote of three-fourths of the delegates in attendance, and shall continue such so long as they remain in good standing in the body of which they were members when elected to membership in this Association, and comply with the requirements of its by-laws."

This was laid over for one year.

The report of the Librarian was read and accepted, and resolutions were passed empowering the Committee of Publication to arrange exchanges with journals, naval and military bureaus, etc. The success of the library movement is most encouraging, as the number of titles upon the shelves already reaches four hundred and thirty-one, an exhibit rendered still more flattering by the fact that many of these are odd or incomplete volumes.

At the request of Dr. Woodward, U.S.A., the Committee on the Nomenclature of Diseases was continued.

In accordance with a resolution offered by Dr. William B. Atkinson, it was agreed that a suitable medal be prepared, having on one side the likeness of Dr. N. S. Davis, and on the other the name and date of the organization of the Association, and that hereafter one such medal be presented to each delegate upon his becoming a member.

The judicial council made a report exonerating Dr. W. T. Myers of all charges made against him.

Section One.—Dr. L. D. Bulkley read an article on "A New Antipruritic Remedy," which was referred to the Committee on Publication. The principal facts in Dr. Bulkley's paper are as follows:

Eighteen months ago he presented to the profession the *liquor picis alkalinus*, which had proved itself valuable in certain cutaneous affections in relieving itching in many instances, and whose value in this and other directions is daily becoming more evident. The failure of this as an antipruritic in some cases, as might be expected, led him to the adoption of the compound presented, which had thus far rendered inestimable service, but which had not to his knowledge been heretofore known. A remedy formed of hydrate of chloral and gum camphor, equal parts, rubbed well together, was found to be convertible into a transparent, colorless fluid, of the consistency of glycerin. It at once occurred to Dr. B. that it would be of value in cases presenting the above symptoms, and he had long employed the chloral internally with good results. He had some ointment prepared of pulverized gum camphor, hydrate of chloral, and rose ointment, which produced excellent effects when rubbed on the healthy skin. The compound was also soluble in almond oil, alcohol, and ether. Two cases were cited in which the remedy had been employed with satisfactory results.

Without any extended discussion, the paper was referred to the Committee on Publication.

After this there was a sort of running debate upon the President's address, and it was finally agreed that, in accordance with its suggestions, two committees should be appointed by the chair,—one on Meteorological Observations, Dr. Toner, of Washington, to be chairman, and the other on the Observation of Disease, Dr. N. S. Davis to be chairman.

Dr. Garrish, of New York, then read a long paper upon hydrophobia, containing an interesting history

of the disorder, but nothing at all novel, unless it be the suggestion that bronchotomy should be resorted to in the treatment of the disorder.

Dr. E. Seguin, a New York delegate, made an exposition of his method of mathematical thermometry, and an exhibition of his thermometers. The instruments differ from the old ones in two points: first, zero is at the point of human health (old 38 deg. 40 min., F.), instead of at the point of melting snow of the weather thermometer; second, a special instrument is devised to measure the heat of limited surfaces, like the forehead of a student, the seat of formation of a tumor, etc.

These instruments serve to create the new method of observation advocated by Dr. E. Seguin. Instead of tracing the march of disease by curves difficult to make, and still more difficult to read correctly, he uses only figures, and sums up all the phenomena—heat, pulse, and inspiration—by figures which, tabulated by days and weeks, permit a mother to be more positive in her appreciation of the condition of her sick child than many physicians can realize by simple guessing.

The thanks of the Section were voted, and the paper was ordered to be printed.

Section Three.—Dr. Beard made an extended address upon the use of electricity, in which he arrived at the following conclusions:

1. That certain benign tumors, as goitres, cystic tumors, and naevi, can be made to diminish or to disappear under electrolysis.

2. That fatty tumors and many enlarged glands usually do not much diminish under electrolysis, and sometimes will not diminish at all.

3. That malignant tumors will not usually diminish, and rarely, if ever, disappear, under electrolysis; but the pain connected with them can be treated most successfully, not only by electrolysis, but also by simple external electrization.

4. That malignant tumors, when sufficiently accessible and not too far advanced, may be treated by the method of *electrizing the base, or working up the base*, as Dr. B. terms it, and this method promises more permanent results than have been obtained by the usual treatment.

5. That certain diseases of the skin—herpes, eczema, and prurigo—may be treated by different methods of using electricity with the highest success.

6. That diseases of the skin may be treated by local and *central* methods of using electricity; but some of the most brilliant results in the treatment of chronic eczema have been obtained by galvanizing the nerve-centres, in the method of *central galvanization*, without making any application whatever to the diseased parts. The results of this method of treatment seem to show pretty conclusively that chronic eczema is to a considerable extent dependent on the central nervous system.

The question of fractures was again brought up.

Dr. J. W. Hughes, of Pennsylvania, stated that the action of the Section in reference to the rejection of Dr. Quimby's motion in reference to Dr. Sayre's paper upon fractures looked better for Dr. Sayre than it did for the gentlemen present, a large majority of whom were undoubtedly opposed to the theories advanced and sustained by the statistics furnished. He therefore, for the purpose of placing the Section right before the profession, offered the following:

"Whereas, The members of the Surgical Section of the American Medical Association have listened with interest to the report of Prof. Sayre, of New York, on the subject of fractures, and whereas, statistics accompanying said report evince in the institution represented unusual results; therefore,

"Resolved, That the Section, after free discussion of the report, and its reference to the Publishing Com-

mittee, would express their opinion, based upon experience, that the results, in relation to shortening following fractures, are better than can be looked for in general practice."

A somewhat excited discussion of scarcely more than mere personal interest followed, and was brought to a conclusion by the adoption of the resolution.

Dr. William P. Pierce, of Lamont, Illinois, offered the following, which was adopted:

"*Resolved*, That this Section hereby requests of Prof. Sayre that as far as possible he should cause a second measurement to be made of all these cases, and report the result of such measurement at the next session of this Association."

In the afternoon session Dr. D. O. Farrand, of Detroit, introduced two cases of oblique fracture of the femur in boys, which he claimed to have cured, one with only a very slight shortening, the other with absolutely none, and asked those interested to examine the boys. The larger of the two was ten years old; his fracture had taken place six years previously, and he it was whose cure was said to be perfect. He was taken into the jury-room, undressed, and, on motion of Dr. Sayre, was measured by a committee of all who did not believe in the completeness of the cure. Nearly every one present examined him, and a number of measurements were taken, some finding the leg which had been broken to be the shorter, while others claimed the contrary. Among those who stated that absence of shortening was totally impossible was Dr. J. T. Hodgins, of St. Louis, who was apparently much chagrined when he reported that the left leg was the *shorter*, when it turned out that the right was the one which had been broken. He, however, claimed a triumph, as he said the result only showed the accuracy of his position "that a correct measurement was an impossibility."

Dr. Sayre was evidently delighted at this evidence in favor of his theory of the possibility of perfect cures, and not only that, but that it also went to sustain him in his statement that the younger members of the profession were the most successful men.

Section Four.—Papers were read by Dr. E. Lloyd Howard, of Baltimore, on Emotional Insanity, and by Dr. A. N. Falley, on the Relations of Psychology to Medicine, and were referred to the Publication Committee.

Section Five.—Various matters were discussed, the most important being as follows:

A resolution offered by Dr. H. B. Baker, of Lansing, Michigan, was adopted. Under it Drs. Baker, H. A. Johnson, of Chicago, and Toner, of Washington, were appointed a committee to draft a bill for the establishment of a National Council of Health at Washington, and otherwise to forward the proposed measure.

Dr. Horner offered his annual resolutions in regard to alcohol, and, after a long discussion, had the satisfaction of having them passed, sixteen members being present.

FOURTH DAY.

The Association was called to order at the usual hour.

On motion, Dr. E. W. Jenks was added to the delegates authorized to represent the Association before similar foreign organizations.

On motion, the following were appointed a committee to digest a plan for an International Medical Association: Drs. J. M. Toner, of the District of Columbia; N. S. Davis, of Chicago; Alfred Stillé, of Pennsylvania; Austin Flint, Sr., of New York, and J. S. Billings, United States Army.

THE NOMINATIONS.

Dr. H. T. Byford, of Colorado, submitted the report of the Committee on Nominations, which, after various corrections, was adopted, as follows:

The Committee on Nominations respectfully report that they suggest the following gentlemen for the various officers named:

President, Dr. W. K. Bowling, Tennessee.

Vice-Presidents:

1. Dr. William Brodie, of Michigan.
2. Dr. J. J. Woodward, of United States Army.
3. Dr. H. W. Brown, of Texas.
4. Dr. H. D. Didama, of New York.

Treasurer, Dr. Caspar Wister, of Pennsylvania.

Librarian, Dr. William Lee, of District of Columbia.

Committee on Library, Dr. Johnson Elliott, of District of Columbia.

Assistant Secretary, Dr. Will. Walling, of Kentucky.

Committee of Arrangements: Drs. Edward Richardson, Chairman; Lawrence Smith, Robert Gale, James Holland, Henry Bullitt, J. M. Keller, D. W. Yandell, Lewis Rogers, R. C. Hewett, all of Louisville.

Committee on Prize Essays, Drs. J. A. Oetlerloney, L. P. Yandell, J. D. Jackson, all of Kentucky; Theophilus Parvin, T. M. Stevens, both of Indiana.

Committee of Publication, Drs. F. G. Smith, Wm. B. Atkinson, D. Murray Cheston, Caspar Wister, Alfred Stillé, all of Pennsylvania; William Lee, of District of Columbia; H. F. Askew, of Delaware.

Next place of meeting, Louisville, Kentucky.

Time of meeting, first Tuesday in May, 1875.

The committee also report the following nominations for

Chairmen and Secretaries of Sections for 1875:

1. Practice of Medicine, Materia Medica, and Physiology, Dr. Austin Flint, of New York, Chairman, and Dr. J. K. Bartlett, of Wisconsin, Secretary.

2. Obstetrics and Diseases of Women and Children, Dr. W. H. Byford, of Illinois, Chairman, and Dr. S. C. Bussey, of District of Columbia, Secretary.

3. Surgery and Anatomy, Dr. E. M. Moore, of Rochester, New York, Chairman, and Dr. Thomas S. Latimer, of Maryland, Secretary.

4. Medical Jurisprudence, Chemistry, and Psychology, Dr. Jerome Cochran, of Alabama, Chairman, and Dr. G. A. Moses, of Missouri, Secretary.

5. State Medicine and Public Hygiene, Dr. H. I. Bowditch, of Massachusetts, Chairman, and Dr. H. B. Baker, of Michigan, Secretary.

Judicial Council, Drs. J. K. Bartlett, Wisconsin; R. H. Gale, Kentucky; J. B. Johnson, Missouri; J. R. Bronson, Massachusetts; B. H. Catlin, Connecticut; Franklin Staples, Minnesota; W. T. Briggs, Tennessee, in place of the seven whose terms expire at this meeting. Dr. A. N. Talley, of South Carolina, for two years, to fill vacancy. The rest of the present council continued.

The reports of the Publication Committee and of the Treasurer were read, and, excepting those portions which referred to the resignations of the Chairman of the Committee and of the Treasurer, were accepted. By special motion, the Association declined to accept the resignations alluded to.

The death of Dr. George Mendenhall, ex-President of the Association, was announced, and a committee was appointed to draft suitable resolutions.

After elaborate resolutions of thanks to the medical profession and others of the citizens of Detroit for their careful hospitality had been acted upon, Dr. Keller, of Kentucky, offered the following resolution, which was adopted:

"*Resolved*, That, in furtherance of the views expressed by Dr. Gross in his valuable address touching

a proper legislation to prevent the spread of syphilis, a committee composed of Dr. Gross, Dr. N. S. Davis, Dr. J. M. Toner, Dr. Marion Sims, and Dr. John Morris, be appointed to report at the next meeting the most feasible plan for securing such legislation."

In the remaining hours of the session various business, not of general interest, was transacted.

A paper by Dr. Paul F. Eve, on Surgery in the West, was read, and the following amendment to the Constitution was offered by Dr. H. B. Baker, of Michigan, which, under the rules, was laid over until the next session of the Association:

"The officers of the several Sections shall be nominated by the Sections in and for which said officers are to serve."

It was decided that the next meeting should be held at Louisville, Kentucky.

TRANSLATIONS.

PARENCHYMATOUS INJECTION OF CARBOLIC ACID AS AN ANTIPHLOGISTIC (C. Hüter, of Greifswald: *Centralblatt*).—Although the antiphlogistic use of carbolic acid externally as a surgical dressing is sufficiently well known, and likewise its use hypodermically in treating intermittent, Hüter claims to be the first to bring into notice the favorable results attained in his clinic by its use as an antiphlogistic, by means of parenchymatous injections. The solution which was used in this treatment was of the strength of 2 per cent. by weight; and the injections were made with an ordinary hypodermic syringe, which held about 0.9 grammes of the solution, or rather less than 0.02 grammes of carbolic acid. More than two injections of this amount were never administered in immediate succession, and they were never followed by any symptom of carbolic acid intoxication, nor even by any darkening of the urine. If more than two injections were made, an interval of a day or two was allowed to intervene, lest evil consequences should result from any cumulative effects of the drug. The operation was in no case followed by pain or swelling; indeed, the absence of pain was so complete that even small and sensitive children gave no evidences of suffering. The antiphlogistic effect of the injections was well marked in almost every case, and the following are adduced in illustration:

1. Synovitis hyperplast granulosa (tumor albus) of the knee-joint. The injections were made into the central part of the joint, the needle even touching the surface of the articulating cartilages. Diminution of pain followed, and also a noticeable falling in the evening temperature, which had previously been persistently high; and a reduction of the swelling was also noticed. As the disease was of a chronic character, frequent repetition of the injections at intervals of two or three days was needed.

2. Subacute glandular swellings with a tendency to supuration; buboes of the inguinal and femoral regions.

Here there was a diminution of the pain and also of the redness of the skin and the œdema; the gland became rounder, and gradually diminished in size. Numerous injections, however, were needed before entire recovery.

3. Acute phlegmonous inflammation of the subcutaneous and subfascial connective tissue. The most central spot of the inflammation should be chosen for the introduction of the nozzle of the syringe, and if the phlegmon is of large size two injections at different situations should be made.

The operation in this case was followed by diminution of the fever and pain, and in a few hours by contraction of the tissues involved. Recovery without supuration

occurred when this process had not already begun at the time the injection was made.

4. Traumatic erysipelas. In this disease, injections were made at the edges of the inflamed area, with the view of preventing the spread of the process upon the sound skin.

The desired object was attained, but in no case was the attempt made to cut short an attack by making injections around the entire circumference of the diseased area.

Hüter lays great weight upon the parenchymatous nature of the injections, and insists that to obtain its full antiphlogistic effect the carbolic acid must be introduced into the articular cavities of the larger joints, into the perivascular connective tissues, and into the interior of the lymphatic glands; and that when so administered it will produce the most satisfactory results.

He hopes, too, that this mode of treatment may prove to be of value not only in surgical practice, but likewise in disease of the internal organs of the body. He thinks that there are no weighty objections against injections of this nature into the lungs, spleen, liver, and kidneys; but before proceeding to these, careful experiments upon the inferior animals must be made. Care must always be taken to avoid the introduction of the carbolic acid into a vein, so that its poisonous effects shall not be caused.

In the treatment of benign tumors he has not as yet succeeded in attaining complete recovery, and he thinks it probable that carbolic acid would be advantageous also in the treatment of malignant growths, since it possesses anæsthetic qualities and is not irritating in its effects.

W. A.

ANGEIOLEUCITIS OF THE LUNG.—A memoir on this affection was read before the *Soc. Méd. des Hôpitaux* recently by Dr. M. Renaud. Dr. R. in this memoir gives an account of several cases of the disease occurring under his observation and that of others, and concludes as follows:

1. There exists a lesion of the lungs heretofore undescribed in our classical treatises, and which is characterized by varicose turgescence of all the lymphatic vessels, superficial and profound.

2. This lesion merits the name angeioleucitis. While it has a certain relation to cancer, particularly to cancer of the stomach, yet one cannot deny the facts when generalized angeioleucitis of the lungs is said to have been developed without any cancerous affection. Probably angeioleucitis of the lung may be simple or specific in its character, both varieties presenting great similarity from an anatomico-pathological point of view.

3. Angeioleucitis may become a grave complication, and may determine death by the lungs of patients attacked by primitive lesions of other organs.

A. V. H.

COLD IN TYPHUS (*The Practitioner*, April, 1874).—In a paper written in 1801 by Dr. Alvey, and found by Dr. Wilson Fox in an old manuscript volume of the "Report of the Proceedings of a Medical Society in the Country," the author advocates the judicious use of cold baths or tepid spongings in typhus and its varieties. He says he has employed them with a view of diminishing the unnatural heat of the surface, and thus curtailing the duration and lessening the violence of the febrile paroxysm.

NEW ANTISEPTIC OINTMENT.—Lister is said to be using the following, with great success. Paraffin two parts, white wax one part, oil of sweet almonds two parts, boracic acid (powdered) one part.—*Student's Journal*.

PHILADELPHIA
MEDICAL TIMES.
 A WEEKLY JOURNAL OF
 MEDICAL AND SURGICAL SCIENCE.

The Philadelphia Medical Times is an independent journal, devoted to no ends or interests whatever but those common to all who cultivate the science of medicine. Its columns are open to all those who wish to express their views on any subject coming within its legitimate sphere.

We invite contributions, reports of cases, notes and queries, medical news, and whatever may tend to increase the value of our pages.

All communications must bear the name of the sender (whether the name is to be published or not), and should be addressed to Editor Philadelphia Medical Times, care of the Publishers.

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SATURDAY, JUNE 13, 1874.

EDITORIAL.

THE SCIENCE OF HOMŒOPATHY.

HOMŒOPATHY is a fact; facts are obstinate; facts are stumbling-blocks; facts are stepping-stones over which the human intellect climbs towards infinity. Oppressed often with a sense of impotence; longing for new powers over disease as the patriot longs for new power in his country's life-battle; humble as the man who has been tried and found wanting; honestly have we turned to homœopathy as a fact, to find, if possible, some good existing thing in it,—the truth in the midst of error,—the source of its vitality,—and hitherto we have only learnt this lesson—that disease is usually self-limited; that the power of mind over the body is most wonderful; that hygiene is supreme; that honest men warp their theories unwittingly, and practise as they think in accordance with a theory when they are really acting contrary to it; and, finally, that complete knaves do most abound. We have heard a homœopath defending with the stolidness of ignorance the use of aconite in fever, because (God save the mark!) the aconite causes fever; of opium in diarrhœa, because opium causes diarrhœa; and have marvelled at the perversity of the human intellect.

After all, however, the great fact of homœopathy remains, and, we confess, is in a measure to us a stumbling-block; and our various failures have not deterred us from hoping that we may finally discover some further truth which shall make a stepping-stone out of the stumbling-block. Consequently, when a book by a Western homœopath of prominence, en-

titled "The Science of Homœopathy," was put in our hands, we seized it with avidity, and started to read it carefully; we find it a farrago of practical sense, unmitigated nonsense, honest aspirations after truth, blind credulity, and a still greater blindness as to the true relations of things.

When a man tells us that constitutional syphilis is caused by an undue suppression of a chancre, we have the gauge of his mental calibre; and this measure is a fair one of the author of the book before us.

There is one thing, however, in the book that is of great interest, as marking an era in the history of homœopathy. As is well known, one of the original doctrines of Hahnemann was long since ignominiously thrown overboard by his followers; and now the second of the trio follows on the same route, and it is earnestly claimed that the only really vital portion of Hahnemannism is the doctrine of *similia similibus curantur*, and that the homœopath may on suitable occasions use large doses.

It seems to us scarcely possible that homœopathy can long survive this new departure. Take the case of aconite: as is well known, it always depresses in any dose, the amount of depression being proportionate to the amount ingested. A person depressed might recover after the ingestion of infinitesimal doses of the remedy, but if it were used in full amounts under the banner of *similia similibus curantur*, even the wayfaring man, though a fool, could not fail to perceive the disastrous results.

FOOD OF THE MASTODON.

DR. J. GIBBONS HUNT, of this city, recently received from Charles Stodder, Esq., of Boston, a mass which is said to have been recently extracted from such a position within the skeleton of a mastodon as to show that it had formerly been in the stomach of the animal. After getting rid of all opacity in the material, it was at once seen that fragments of plants formed the bulk of it. Both cryptogams and flowering plants were present. Stems and leaves of mosses of several species were in large abundance, with cells as distinct as though gathered yesterday. Large numbers of minute, round and black, opaque bodies, which doubtless are spores of the mosses, were quite apparent. A filament of a confervoid plant was also discovered; cells in a single linear series, square, and similar in appearance to some now found living in the water. We have seen one stem of a flowering plant an inch long, the central part decayed and gone, the outer layer of cells as distinct and perfect as when alive.

Many fragments of marsh plants,—not mosses,—but too much broken to justify a guess as to species, and shells of entomostracæ and ciliated organisms, perhaps infusoria, could be clearly detected. There was not one sphagnum leaf in the lot.

If the mass was really ever in the stomach of a mastodon, the animal died soon after dinner, because the plants were not much digested.

That the mastodons which once roamed the forests we now call our own were vegetable feeders their dentition plainly shows, and the examination indicates also that they were omnivorous in taste, not being confined to the soft cryptogams of the bogs, but eating the branches of shrubs, and, perhaps, young trees as well; for bark and well-marked spiral vessels were present. No fragment of coniferous plant could be detected, and it is probable that mastodons did not eat that class of plants.

REVIEWS AND BOOK NOTICES.

LECTURES ON THE DISEASES OF INFANCY AND CHILDHOOD. By CHARLES WEST, M.D. Fifth American, from the Sixth English Edition. Philadelphia, H. C. Lea, 1874.

The verdict of more than a quarter of a century renders unnecessary, on our part, any words concerning the merits of the book before us. Our only proper task is to announce the birth of a new edition. The storehouse out of which its materials were taken has been enriched by seven years of clinical observation since the last English edition,—years apparently full of fatness, for we read that they have furnished the records of seven hundred and forty-three cases of sufficient interest to be worthy of noting. The present book rests, then, upon the experience gleaned from two thousand cases and nearly six hundred post-mortem examinations. Dr. West's work has always seemed to us pre-eminently the offspring of a bedside rather than a library physician, and to possess all the peculiar merits and some of the demerits of a book of such character. In the present edition we find nothing to alter this conviction.

H. C. W., JR.

THE TREATMENT OF SYPHILITIC DISEASES BY THE MERCURIAL VAPOR-BATH. Compiled from the Fifth London Edition, by Dr. JOHN W. FOYE. A. Williams & Co., 135 Washington Street, Boston, Massachusetts, 1874.

We once heard an observant physician state that he could tell the syphilographers of a city by their equipage being so much more showy than those of their brethren. The author or editor of the present work evidently carries his taste into literature, for the little brochure is about the handsomest medical book we have met with. Beautifully printed upon extra heavy tinted paper, encased in the finest of Turkey morocco and marbled paper; it looks like the latest volume of poetry, prepared for my lady's boudoir; yet the text is redolent of the charnel-house of vice.

The book belongs to the great natural order of Composite. First, after the Preface, there is an essay by Dr. Foye, upon the method of exhibiting the mercurial vapor-bath; then the brochure of Dr. Langston Parker, late of Birmingham, England, "The Mercurial Vapor-

Bath;" next, "The Calomel Vapor-Bath," by Henry Lee, of London; and finally, Mr. Parker closes the rear file by "Notes and Cases illustrative of the Effects of the Mercurial Vapor-Bath upon various forms of Constitutional Syphilis."

It is said that a new style of architecture threatens to arise from the ignorance, independence, and practical sense of American builders. As all these several essays are separately paged in the present brochure, we have a new type of book-architecture; let us hope, however, that it will never become national. Of course, like most books published in favor of any particular mode of practice, the present composite claims that in mercurial fumigations is the *summum bonum* of infected humanity; or, as Dr. Foye puts it, "So unerring is its success that I claim it to be the most perfect system for the cure of syphilitic disease known to medicine."

After examining the evidence, we are unable to agree with this verdict, but do believe that the bath often does great good, and that every one who treats many cases of the disease ought to be well acquainted with the method of its employment. To those desiring such knowledge, we commend this little brochure.

H. C. W., JR.

THE PSYCHOLOGY OF SCEPTICISM AND PHENOMENALISM. By JAMES ANDREWS. James Maclehore, Glasgow, 1874.

Two data support the theorems of this little book, the first being that "Phenomenon is that which appears to be, but is not, what it appears;" the second, "that scepticism is the legitimate fruit of philosophy."

A book which expresses thinking we always welcome to our table with much relish; albeit we do not find ourselves at all times repaid for the greeting we give. He has read but little of the metaphysicians who discovers not that the fallacies which render their obscurities a by-word and jest come not from their being what metaphysicians should be, but, on the contrary, from their being just what they should not be. "Metaphysics," said Aristotle, "is that which comes after physics;" but the metaphysicians of the present day, in spite of the great master, will insist, most of them, on being a-priorists. Hence it is impossible that they should be aught else than sophists, save as the result of some happy accidental stumble upon truth. Mr. Andrews, while he does not himself at all seem to recognize it, is a Berkeleyan, and not what the metaphysician should be, an a-posteriorist; for while it is true that he discusses color, and space, and form, yet it is with the speculative fancy of a Lucretius, rather than with the demonstrative capability of a modern physicist.

Far from being true is it that philosophy has, as its legitimate fruit, scepticism. Scepticism is grown of a pseudo-philosophy. Wisely and well has the quaint Franciscan friar put it, "A little philosophy inclineth men's minds to atheism, but depth in philosophy bringeth men's minds about to religion, for, while the mind of man looketh on causes scattered, it may sometimes rest in them and go no farther; yet when it beholdeth the chain of them confederate and linked together, it must needs fly to Providence and Deity."

While, with Plotinus, not unmindful that it is not well of any man that he maintain over-earnestly that anything is known, yet it may scarcely be denied that, to the uses of the senses, things are what to the senses they seem to be,—a proposition in part Berkeleyan, but in much greater degree Cartesian. That matter and force exist as entities, says, wisely, the learned Prof. McCosh, is an intuitive recognition of every human mind. Three entities are there, teaches the philosophy of Descartes: Soul, Force, Matter,—at least this it teaches, if not exactly in these words. The physicist is necessarily a Cartesian, for if he start not out with such pre-

mises he finds himself quickly enough brought to it. Accepting the data of the Frenchman, or even that of Spinoza, all things grow plain to the understanding as it exists and recognizes; while confusions of all and every kind disappear as mists before a morning sun. To be a Cartesian is to be wise in the wisdom of one generation,—is to be without doubt or mystification,—is to be happily simple with the faithful, immobile with the Socratist.

Phenomena, asserts our author, cannot be what they appear, inasmuch as waking or sleeping we may seem to see the same things; hence, if these be true in the one instance, they may not possibly be so in the other. There the fallacy lies, in a non-recognition of the distinction between soul and mind.

We cannot endorse the convictions and conclusions of Mr. Andrews. Yet we have to thank him for a meditative hour, begotten of his little book, which, coming on the heels of a professional vexation, causes us to think most kindly of his effort. J. E. G.

GLEANINGS FROM OUR EXCHANGES.

REDUCTION OF HERNIA (*The Lancet*, April 25, 1874).—Dr. Edward Warren, chief staff surgeon to the Egyptian army, details a case of strangulated hernia relieved by taxis, and asserts that—1. A very large majority of hernial tumors, especially of the inguinal variety, can be reduced by manipulation, and do not demand the operation of herniotomy. 2. Manipulation should be practised deliberately and thoroughly, giving time enough to the work to determine the question of its feasibility, and, while fearlessly resorting, if necessary, to more than gentle pressure, cautiously avoiding the opposite extreme of roughness and violence. 3. As a general rule, the knife should be the last resource of the surgeon.

In regard to position he says, "When reduction is attempted without chloroform, the patient should be made to stand, with his head and shoulders bent downwards and forwards, and the spinal column inclined towards that groin in which the tumor exists; at the same time the weight of the body should be thrown upon the foot of the unaffected side, and the other foot placed somewhat in advance of its fellow. Should the effort prove fruitless, the patient may then be placed either upon his back, in the usual position, with a pillow under the buttock of the side corresponding with the hernia, and the head and shoulders inclined as before; or in a semi-prone position upon his hands and knees, with head depressed and pelvis elevated, as in certain operations upon the rectum and uterus."

Of auxiliary measures, chloroform is the most important; warm baths are of little use, and tobacco enemata are worse than useless. A good plan is to unload the lower bowel with an enema, inject morphia under the skin near the constriction, and then unexpectedly apply a cold douche to the abdomen, pushing in the gut at the same time.

TRANSFUSION OF BLOOD.—In the first number of the new German surgical journal, the *Centralblatt für Chirurgie*, we find that Dr. Tabouré, of St. Petersburg, has made twenty-eight different experiments on dogs. In the first eleven cases blood of various kinds of animals was transfused, in all cases defibrinated. The blood of dogs was transfused in two cats, and in seven dogs the blood of calves was transfused; cat's blood was thrown into one dog, and dog's blood into a sheep. In two cases, in dogs, death took place from twenty to twenty-two hours after transfusion of calf's blood, and the author in one case attributed the death to paralysis of

the heart, whilst in the second there was œdema of the brain and lungs. In all the rest of the cases the transfusion of defibrinated blood by different species of animals was not only well borne, but it gave the animals strength, like the blood of their own species. The author found the foreign blood to be assimilated in from twenty-four to sixty hours.

In eight cases, again, the leg of a dog was amputated, and great anæmia was caused. In the space of from ten to thirty minutes after the amputation defibrinated blood from calves or sheep was injected. In all cases death was the result from hemorrhage from the stump. Of two dogs which had blood transfused into them twenty-four hours after amputation, the first outlived the operation, whilst the second died on the eleventh day of acute purulent œdema and of septicæmia. In one case transfusion of defibrinated calf's blood was made two and a half days before the operation, and it got well in twelve days.—*The Doctor*.

THE THEORY OF COUNTER-IRRITATION (*The Practitioner*, March, 1874).—Dr. James Ross defines counter-irritation as the application of an irritant to one part of the body in order to influence morbid action in its vicinity. He believes that a counter-irritant always tends to stimulate the neighboring textures to increased activity, and that this stimulating action spreads along the parenchyma, not merely when the tissues are continuous but also when they are simply in contact. The question arises, Does the area of tissue stimulated to increased nutritive activity extend far enough, and in a sufficiently short time, to account for the action of counter-irritation? We can easily conceive that it does when we remember that Dr. Beale has found that if one has only a slight catarrh the bioplasm over the entire body is increased, and also recall the fact that a condition of unstable equilibrium exists between a diseased organ and the rest of the body, the former being much more readily influenced than usual. Dr. Ross says that this theory gives complete unity to our conception of the mode of action of counter-irritants.

IMPOTENCE CURED BY LOCAL FARADIZATION (*New York Medical Journal*, April, 1874).—A gentleman forty-six years of age, who was living with his second wife, had suffered for twelve months from impotence, which, though not absolute, was very annoying and alarming, and had produced a depressing effect on him. Both desire and power were deficient, but not destroyed. The emission occurred too soon. Treatment was commenced by local faradization, by various external applications, and in six weeks he was completely and permanently cured.

RELATIONS OF COLORADO TO PULMONARY CONSUMPTION.—Dr. Thomas E. Massey, of Denver, says that, while there are hundreds of living facts demonstrative of the curability of phthisis in Colorado, there are none to prove that those cures have been effected by any thermometric influences. He believes that the adjuncts of cure in Colorado are distinctly those of nutriment; the outdoor inspiration of pure mountain sunlit air depurating the vital current and stimulating the organs of primary digestion to receive and dispose of the nutritious animal food of the mountain-ranges.

QUININE IN HAY-FEVER (*The Practitioner*, April, 1874).—Professor Binz publishes a letter received by him from a gentleman who had suffered for twenty-one years from hay-fever, which invariably attacked him in the spring. He began to use weak injections of quinine, with the view of profiting by its poisonous action on any infusoria which might be present, but he obtained immediate and almost complete relief. He employed a neutral solution (1-800) of sulphate of quinia.

CHLORAL AS AN ANÆSTHETIC DURING LABOR (*The Lancet*, February 21, 1874).—Dr. W. Playfair has found that chloral has the immense advantage over chloroform, when administered during labor, of not lessening the strength or intensity of the pains, while at the same time markedly diminishing the suffering resulting from them. It is chiefly applicable at a period when we would not think of administering chloroform,—towards the termination of the first stage of labor, before the complete dilatation of the os and when the sharp grinding pains perhaps produce more suffering and are less easily borne than the more forcing pains of a later stage.

He gives the drug at first in fifteen-grain doses, and then in smaller quantity, increasing the intervals between its administration, and thus usually keeps up a full and sufficient effect for hours. It need not at all interfere with the exhibition of chloroform.

OZONE (*American Journal of Pharmacy*, April, 1874).—Mr. Sigismund Beer suggests that the exposure to atmospheric action of common phosphorus matches moistened by water will produce nitrite of ammonium and ozone, both active purifiers of air. He claims that in the use of matches in this way we have a handy, wholesome, and inexpensive means of disinfecting and purifying the air.

MISCELLANY.

HOW TO MAKE COFFEE.—The virtue of coffee consists in its volatile aroma and its fixed extractive matter. The happy combination of these with hot water is the problem for the coffee-maker. This happy combination, in my opinion, when realized in perfection, implies that all the aroma and all the extractive matter of the ground coffee be got into the hot water, and retained there. It seems to me that no argument is required to show that any aroma which escapes into the air, or any extractive matter left in the grounds, is so much virtue wasted. Now, to get at the same time the whole of these constituents of coffee has seemed very difficult. If boiling water be filtered through ground coffee—this is the French plan—the aroma is promptly extracted, and very little else, for the fixed matter needs more coaxing. If the grounds be boiled a long time in water—the Turkish and more common American plan—the aroma escapes with the steam. The French waste the extractive matter; the Turkish the aroma. I take rather more than the usual amount of coffee, and pour on it hot water when it is ready to be used; in other words, I make French coffee. The grounds from this operation I leave to soak in the pot till the next day, when I begin coffee-making by pouring hot water on these grounds, which hot water I use according to the French plan in making coffee from fresh-ground coffee. The process is now in full operation, and every time coffee is wanted the manipulations of the second morning are repeated. I thus extract all the soluble and useful matter of roasted coffee, and waste nothing. To put the art in the most practical form, I have found it necessary to modify the coffee-pot. Perhaps the simplest apparatus is the most ordinary pot provided with two strainers. The strainers are of cup form, and fit into

each other and into the top of the pot. For use I set a strainer on the top of the pot, and into the strainer I place fresh-ground coffee; over this I use the second strainer, containing the grounds of the last operation. Now hot water is poured into the upper strainer, and percolates down into the pot, carrying with it all the goodness remaining in the grounds, and the aroma and much of the extractive of the fresh-ground coffee. When the water has passed down, I throw away the now useless contents of the upper strainer, and upset the contents of the lower strainer into the pot.—*Professor Charles A. Seely, Journal of Applied Sciences.*

CASE OF MUSHROOM-POISONING.—Mr. Sadler, who was to have lectured to the North British branch of the Pharmaceutical Society in Edinburgh, was prevented from doing so by the following rather singular circumstance. While preparing for the Society his lecture on edible and poisonous fungi, he accidentally swallowed a quantity of the spores of a large species of puff-ball (*Lycoperdon giganteum*), and within the space of an hour and a half he was seized with severe illness, accompanied with violent pains. The violent symptoms could not be subdued until nine days after the first attack, by which time the patient was much weakened. Sir Robert Christison, Dr. Balfour, and Dr. William Craig, who have attended Mr. Sadler, are of opinion that the continued irritation was kept up by the fungus-spores. Mr. Sadler, though now in a fair way of recovery, is still confined to bed. The giant puff-ball is edible in its young state, but its matured spores ought certainly to be avoided.—*British Medical Association.*

USES OF THE YUCCA.—The root-stock of all the Yuccas is, under the name of "Amole," an important article in a Mexican household, being everywhere used as a substitute for soap, as it is replete with mucilaginous and saponaceous matter, probably a substance analogous to the saponine of the *Saponaria* root. It is curious to learn that the negroes of the coast of Carolina repeatedly destroyed Dr. Mellichamp's carefully-preserved clumps of yuccas, in order to obtain the saponaceous root-stock. How may the knowledge of its quality have reached them? Perhaps from the West Indies.—*Journal of Applied Science.*

POWDERED MEAT.—Powdered meat is prepared by Dannecey, *pharmacien en chef* of the hospitals of Bordeaux, by finely chopping the fresh meat, spreading it upon muslin, and drying it rapidly in a current of air. A friable mass is formed, which readily yields a brown, nearly odorless powder, possessing a feeble saline taste, and of which one part represents five parts of fresh meat. It is used and readily taken by patients by adding a teaspoonful to a cup of beef-tea or soup, or by spreading upon bread. For children it is mixed in certain proportions with the ingredients for biscuits.—*American Practitioner.*

OPIUM-ANTIDOTES.—In the *Peninsular Journal of Medicine* for April, Dr. A. B. Prescott shows that the "opium-antidotes" of Dr. Squire and of Dr. Collins are simply preparations of morphia.

CASTOR OIL VERSUS LEATHER.—A correspondent of the *Germantown Telegraph* states that after an extensive trial he has found castor oil much superior to all other fats and compounds as a preservative of leather, and the editor of the *Druggist's Circular* endorses the proposition.

RECENTLY, in Fall River, a jury awarded a lady, who had been almost fatally poisoned, \$15,000 damages; the defendants being a wholesale house which had sold a wrongly-labelled drug to the retailer of whom she had purchased. An appeal was taken to a higher court.

It is announced that Prof. Cohnheim is so much better that he will resume his duties at Breslau; also that Von Recklinghausen has finally accepted the position recently held by Prof. Rokitsky.

ALIZARIN is suggested as a substitute for litmus, and it is said to be about ten times as delicate in its reactions.

DR. W. P. ARMSTRONG advises rhus tox. (homœopathic) for "itching of the bones."

NOTES AND QUERIES.

INAUGURATION OF THE HOSPITAL OF THE UNIVERSITY OF PENNSYLVANIA.

The inauguration of the Hospital of the University of Pennsylvania took place on the 4th instant, with appropriate ceremonies.

A large number of the friends of the University, including various clerical, judicial, and lay celebrities, were present, as well as many ladies. An opening address was made by his excellency, the Governor of the Commonwealth, in the lower hall of the building, and two tablets fixed upon the walls of this hall not far from the main entrance were erected. The first of these contains the following inscription: "This hospital was erected through the liberality of the State of Pennsylvania, City of Philadelphia, and many citizens."

On the other is inscribed, "Inaugurated June 4, 1874, by his excellency John Hartranft, Governor of Pennsylvania."

After a banquet, the assembly adjourned to the larger lecture-room, where an admirable address was delivered by the Hon. William A. Wallace, of the State Senate, a firm friend of the institution, and to whose efforts were largely due the appropriation granted by the legislature. The address comprised a succinct history of the inception and carrying-out of the enterprise, and was listened to with great interest. At its close the company dispersed through the building for the purpose of inspecting it, while an orchestra supplied entertainment in the shape of a number of agreeable selections. The whole afternoon passed very pleasantly, and with these simple ceremonies was inaugurated an institution which will doubtless exercise a marked influence on the future of the University to which it is attached, and also on the progress of medical science in this country.

Various accounts of the architectural characteristics of the building have appeared from time to time in the daily papers, but there are some points of interest to medical men which may be mentioned.

The plan of the hospital includes a central building of administration, with a series of pavilions, six in number, and calculated to accommodate when completed at least seven hundred patients; of these the central building and one pavilion are completed, giving accommodations for one hundred and eighteen patients. The central building contains kitchen, apothecary-shop, steward's apartments and offices, and in addition, rooms for private patients, resident physicians, etc.

Two admirable lecture-rooms are contained in this part of the building: a smaller one on the first floor, which will accommodate two hundred students, and an amphitheatre, having its base in the second story, sixty feet in diameter, and forty-five feet high to the skylight in the centre of the ceiling, which is furnished with a dome. It will seat over five hundred persons. The main building is separated from the pavilion by a fire-proof corridor, preventing all possibility of the communication of fire from one portion of the structure to another. The basement of the pavilion is occupied by a series of apartments, or rather suites of rooms, intended for the

accommodation of the out-patient department. Each suite consists of a waiting- and a consulting-room, supplied with the necessary conveniences.

The medical and surgical dispensaries, the eye- and ear-, the skin-departments, etc., are entirely independent of each other.

There is also a general waiting-room connected with the apothecary-shop. On this floor are the rooms in which baths of various kinds will be placed for the treatment of different forms of disease, and also apparatus for the disinfection of clothing. The baths, when completed, will form probably the most complete system yet devised, comprising the various varieties of Turkish, Persian, continual, needle, vapor, douche, mercurial, etc.

The first and second floors contain each a larger and a smaller ward, the former accommodating thirty-two patients, the latter ten each. The third story will contain a ward for twenty-four beds. Connected with each of these wards is a series of admirably arranged bath-rooms, water-closets, sitting-rooms, convenient rooms for nurses, kitchens, and dining-rooms. As regards the arrangement for ventilation in the wards, it is perhaps not too much to say that it has never been surpassed in any similar institution. Twenty-four large windows are placed opposite one another, while a series of Barker's ventilators are arranged at the head of each bed, and comprise such a combination of heater and ventilator as to insure a plentiful supply of fresh air at a regulated temperature, while the colder foul air is carried off by a current created in the ventilating flue. Besides these, there are in each ward four large open fireplaces.

The whole building is plentifully provided with such labor-saving apparatus as bells, speaking-tubes, and dumb-waiters. One vertical railway or lift is of such size that a bed may be placed upon it, and patients raised or lowered to the various floors, as desired.

Besides the various baths, general and special, connected with the different wards, there are movable bath-tubs which are capable of being brought in immediate proximity to the patient's bed, and are likely to prove extremely useful in fevers and other cases where the application of water may be indicated.

When the buildings connected with the Hospital are completed, they will include, in addition to the ones already erected, certain others devoted to the study of physiology and pathology; the whole providing for not only the cure, but the study, of disease, with a completeness which it is believed has not heretofore been attained in this country, and which augurs most favorably for the future of our city as a "medical centre."

The cost of the structure has been in the neighborhood of \$200,000, which has been given by the State, while the six acres of ground on which it is situated is a gift of the city. For the support of the hospital, some \$350,000 has been raised by private subscription; and for the \$200,000 which is still necessary to place it on a proper footing in this respect, the Trustees appeal with confidence to the alumni and other friends of the University of Pennsylvania.

TO THE EDITOR OF THE PHILADELPHIA MEDICAL TIMES:

In your issue of May 30, 1874, I noticed an abstract copied from the *London Lancet* which calls for a word of correction. It is headed "Elephantiasis Græcorum," but it is very manifest from the description of the case that quite another disease is meant,—namely, Elephantiasis Arabum. E. Græcorum is a term synonymous with leprosy, while E. Arabum is the name universally employed to describe the affection referred to in the abstract.

Respectfully yours,

ELEPHANTIASIS.

We have been requested to warn our city readers against a gentlemanly man who insists upon writing notes in the office during physicians' absence, and pockets whatever he may find of value.

OFFICIAL LIST

OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U.S. ARMY, FROM JUNE 2 TO JUNE 8, 1874, INCLUSIVE.

BAILY, E. J., SURGEON.—Assigned to duty as Medical Director of this Department. G. O. 7, Department of the Columbia, May 20, 1874.

COOPER, GEORGE S., SURGEON.—Relieved from duty as Medical Director, and to report to Commanding General, Department of California. G. O. 7, c. s., Department of the Columbia.

WILLIAMS, J. W., ASSISTANT-SURGEON.—To report to Lieutenant-Colonel G. A. Custer, 7th Cavalry, for duty with Black Hills Expedition. S. O. 111, Department of Dakota, June 1, 1874.

STEINMETZ, WILLIAM R., ASSISTANT-SURGEON.—Granted leave of absence for three months. S. O. 120, A. G. O., June 1, 1874.

SATURDAY, JUNE 20, 1874.

ORIGINAL LECTURES.

CLINICAL LECTURE

ON THE TERMINATIONS OF PNEUMOTHORAX; ESPECIALLY ON ITS TERMINATION IN RECOVERY.

Delivered at the Pennsylvania Hospital, November 15, 1873.

BY PROF. J. M. DA COSTA,

One of the Physicians to the Hospital.

Reported by EDWARD W. JAMESON, Resident Physician.

THIS morning I propose to bring before you some cases of pneumothorax, and to call your attention to the different modes in which this malady may terminate. Particularly shall I dwell upon some points connected with a favorable ending, and show you how the accumulation of air in the pleural sac, which is the essence of this grave malady, may pass away. The patient now before you illustrates some striking facts connected with the subject. Let me present the main features of his case.

Robert T., 21, single, a teamster by occupation, was admitted into this hospital October 21, with the following history: Driving his wagon while in an intoxicated condition, he fell from his seat and was run over, the hind wheels passing over his chest. The wagon was not loaded at the time, and at first he experienced no pain.

On admission, he was sent to the upper surgical ward. He was still under the influence of liquor, and was spitting up small quantities of blood mixed with saliva. He did not cough. No fracture of the ribs could be detected, and the only injury found was an abrasion over the right scapula. The next day the patient said he felt better, had neither pain nor cough, and the hæmoptysis had ceased.

Two days afterwards he began to cough, and expectorated rusty sputa. There was fever in the morning, and in the evening his pulse was 116, and temperature 103°.

On the fourth day after coming to the hospital he was admitted to the medical ward, and this was his condition: "Tongue pale, and covered with a light white fur; appetite poor; some fever; urine normal. On deep inspiration he complains of a pain in the right side, on a line with the axilla. On percussion, a tympanitic note is elicited anteriorly and posteriorly at the upper portion of the right side of the chest. At the base there is dulness, which changes with the position of the patient. Amphoric respiration is heard under the right clavicle and at the inferior angle of the scapula. The breath-sounds are distant. The amphoric voice is well heard. On placing the ear against the chest, and shaking the body, succussion is distinctly perceived. There is constant hacking cough, and he has expectorated a small coagulum of blood. He was ordered pills of quinine, digitalis, and opium.

Gentlemen, you have heard me read the notes of this case prior to its coming into my hands. A few days after taking charge of it I was struck with the fact that no succussion existed, and that the amphoric respiration and percussion had disappeared.

They have not been re-developed; the patient is gaining flesh and color; his breathing is no longer labored, and there is a marked change in every respect for the better.

A physical examination to-day finds the right chest larger and fuller than the left. When he breathes, although the right side moves, it does not move so freely as the left. Inspection shows the intercostal spaces on the right side effaced. The percussion-note anteriorly on the right side is clear, except over the lower part of the lung, where from the nipple down dulness is perceptible; no material difference exists anteriorly at the upper part between the two sides; the right side is, however, of lower pitch than the left. Posteriorly, over the upper and middle of the right lung the percussion-note is clear, but approaches to a tympanitic sound, yet not so markedly as four or five days since; lower down there is dulness.

Auscultation over the right side anteriorly shows the respiratory sounds decidedly feebler than over the left side. A few fine friction-sounds are heard at the upper part of the lung both anteriorly and posteriorly on the right side; the respiration at the lower part of the lung is absent; the vocal vibrations are much more distinctly perceptible over the left side. There are not on either side succussion-phenomena or râles. The action of the heart is rapid, the pulse quick and somewhat jerky.

This is undoubtedly a case of pneumothorax ending in recovery. Indeed, when we see that our patient now is up and dressed, it is evident that he also is regaining his strength. Nor will it be necessary to continue the pills of quinine, digitalis, and opium long; a mixture consisting largely of iron with acetic acid and acetate of ammonium will take their place, and act more efficiently the part of a tonic.

There are many points about the case that I could call your attention to, and especially several connected with the development of the trouble. But the great interest consists, after all, in the disappearance of the signs of pneumothorax, and in the striking improvement in health which went hand in hand with the disappearance. The air must have been absorbed, and the spot of puncture of the lung healed. There is still some fluid in the pleural sac, but it is much diminished, and everything betokens a complete return to health.*

Now, this illustrates one form of recovery,—a speedy recovery, too, in which the absorption of air has been rapidly followed by the absorption of the small quantity of fluid that existed. Such cases are, on the whole, not very frequent, yet you will meet with them every now and then. Some years since, I saw with my colleague, Dr. John F. Meigs, and with Prof. Stillé, one quite as striking, and similar in many respects, excepting in its origin. It occurred in the person of an iron-master, about fifty years of age, most extensively and laboriously engaged. He noticed that without any very evident reason he was

* When the patient left the hospital, December 22, he was looking well and strong. The signs of effusion had all but gone; the respiratory murmur over the lower part of the lung had become distinct.

unable to exert himself actively; indeed, exertion made him short of breath, which he attributed to being weaker than usual. Coming to the city, Dr. Meigs found the cause of the waning strength to be a right-sided pneumothorax; but how it had happened could not be definitely ascertained. There was neither tubercle nor emphysema, and the only clue to the case was that several weeks before the dyspnoea was noticed the patient had had a severe cold, attended with cough and oppression, which might have been a latent pneumonia. The physical signs of pneumothorax were certainly most marked: the cough and voice and breath-sounds distinctly metallic; succussion-phenomena did not, however, exist. The liver was displaced, but there was no pleuritic effusion, or this was so slight that its very presence was doubtful. In the course of a few months, under rest and tonics, the air in the sac vanished, and I heard recently that our patient was in vigorous health, and had remarried. In this case, of which we may say that it was a pure one of pneumothorax, the air was absorbed, rest and tonics, as in the preceding case, favoring the favorable issue.

But there are cases which form, as it were, a group by themselves, in which the pneumothorax proper passes away, but in which the disorder terminates in chronic pleurisy, having all the chances and complications, and requiring the treatment, of this affection. The following instance, which came under my observation some years ago, is a case in point. A young man, 22 years of age, in seeking relief for his dyspnoea, stated that while heated and perspiring freely he was subjected to drafts of cool air, and soon afterwards found himself with a cough which had never left him. About four months afterwards he was seized with pain in the left side, and with difficulty in breathing. When he presented himself to me he was pale, thin, had a cough, with thin mucous expectoration, a pulse rapid and feeble, and constant and troublesome difficulty of breathing and pain in the left side. Physical examination showed that the left side of the chest was more prominent than the right, and anteriorly at the upper portion the intercostal spaces were effaced. The left side from the ensiform cartilage to the vertebræ measured nearly three-quarters of an inch more than the right side. Percussion proved the right side to be clearer, while the left side was extremely dull at the lower middle portion anteriorly and posteriorly. Auscultation on the right side anteriorly showed a loud and harsh sound; the expiration at the apex was distinctly prolonged. On the left side, at the upper portion, there was a friction-sound in expiration, but no vesicular murmur; occasionally the ear caught a metallic tinkle and a metallic whiff of respiration, especially in expiration. At the posterior edge of the scapula there was metallic respiration with distinct metallic tinkling. The voice had a metallic ring at the same spot; the fremitus was not increased, perhaps decreased. The vocal resonance anteriorly was feeble. At the posterior portion lower down, voice and respiration were absent. No splashing sound was heard.

I saw my patient from time to time, and found him gaining strength and flesh; his breathing by degrees became easier, and the physical signs improved,—that is, the metallic phenomena were not so marked.

His condition, under the use of iron, iodide of potassium, and cod-liver oil, remained satisfactory for some weeks, and I did not see him until, visiting me again, I found that on percussion on the left side there was flatness from the clavicle down, and over the whole of the left lung posteriorly the same absence of resonance existed. The right side was clear. Inspection showed the heart beating on the right side, pushed considerably over the right edge of the sternum. Auscultation made apparent that the inspiration all over the right lung was distinct, even somewhat harsh; the expiration was prolonged. On the left side, anteriorly, the respiratory sound was nearly absent; between the second interspace towards the sternum an occasional whiff-like amphoric breathing was heard, and at a point posteriorly nearly corresponding to the middle of the scapula this same sound was heard, only more blowing and less amphoric. At the upper portion of the lung the voice was distinct, but not so much so as on the right side, although it was slightly more concentrated. The vocal fremitus was stronger all over the right lung.

In the course of some weeks all the amphoric phenomena had disappeared, and the case had become one of chronic pleurisy with large effusion. The most troublesome symptom was difficulty of breathing, and although the general condition continued to improve, this did not. The operation of paracentesis was urged, but declined. My patient now left the city. After losing sight of him for two years, he presented himself with the statement that since last examined he had been living in Connecticut, and had been working steadily, and although on severe exertion he had not been able to breathe freely, yet he had been generally in good health up to three or four weeks prior to his return, when, after a by no means hard day's work, he was seized with chills and a cough, which he attributed to checked perspiration. He was weak, and on listening to his chest I found there were râles in both lungs, especially audible over the right. In the left a most peculiar sound was heard: it resembled a double blowing sound of high pitch, but was metallic, and did not stop when breathing stopped. It seemed to be produced by the action of the heart; yet there was no murmur in the heart, nor was this sound constant. Lower down, the respirations were very feeble, hardly audible. There was dulness on percussion posteriorly low down, also at the inferior lateral portions of the chest; the note was clear above.

The heart was precisely at the right side of the sternum; there was no succussion-sound, but rattling sounds were audible on breathing, even when the ear was not placed to the chest. He was expectorating a great deal. At several examinations made subsequently, distinct metallic breathing and tinkling were perceived near the inferior angle of the left scapula, and signs of tuberculosis of the right

apex, and of softening at the left, became manifest. Still later in the case the physical signs changed again. There was dulness on percussion *all over* the left lung, beginning very high up anteriorly; the amphoric sound, the râles and metallic tinkling, had disappeared. It was evident that the effusion had again increased. The difficulty in breathing was now very great; the expectoration amounted to but little. The feet began to swell, and night-sweats were frequent and exhaustive. The dropsy increased, and the patient died, exhausted. His illness had lasted upwards of three years.

Now, I shall not attempt to explain to you at length the phenomena of this remarkable case. We may, I think, assume that the patient had at first a latent pneumonia, followed by giving way of the lung and pneumothorax; that either just prior to this, or soon afterwards, he became tubercular, and that though the tubercular trouble never assumed any activity until late in the case, it finally much hastened the fatal ending.

But I pass by these points, as well as the interesting fact that the metallic phenomena were at times developed by the action of the heart, to recall how the case of pneumothorax terminated in chronic pleurisy; how the opening through which the lung and pleura communicated must have been closed; how comparatively well the man was for several years; how, finally, the same spot at which the original injury took place must have reopened, or one near to it have given way; and to note the curious way in which the signs of pneumothorax again disappeared, suggesting that the second break had been closed, and, most likely, also in the same manner by the exudation resulting from the inflammation of the irritated pleura.

You can easily understand, also, how in a case of the kind, provided the fluid can be evacuated, and no other trouble lie back of the chronic pleuritic effusion, a complete recovery may happen.

Let me now call your attention to a third mode of termination: not one that can be exactly called a recovery, yet one in which the patient remains for a long time in fair general health, while the signs of pneumothorax persist.

I shall never forget my astonishment at the first case of this nature I saw,—that of a lawyer, who from his history had evidently had the malady for nearly a year, and in whom the shortness of breath was the only annoying symptom,—when I found the most marked signs of pneumothorax in examining his chest, including succussion and metallic tinkling.

Since, I have seen similar instances of what I may call chronic pneumothorax; and it is astonishing how well some of them have done, and how the breathing-powers have accommodated themselves to the anomalous state of things.

But sooner or later, unless the opening in the lung closes, and the disorder enters, therefore, into the second category discussed, it terminates fatally, and usually by gradual exhaustion. And if you ask me whether, from experience, I can tell you of any general law by which you may suspect that the case has ceased to do well, I answer that I believe

that the accurate appreciation of *the quickening of the respiration, and especially the marked quickening of the action of the heart*, is that general law.

Having now explained to you the terminations of pneumothorax in recovery, or at least in conditions favorable to the prolongation of life, I will show you the specimens obtained from an instance of tubercular pneumothorax recently in the ward, and will, in reading you the history, tell you of the means by which, while they did not avert the unfortunate issue, considerable relief was afforded:

"Charles W., 40, married, carpenter, free from venereal taint, a sober, industrious, hard-working man, whose parents died of phthisis.

"His wife relates that he had more or less cough since last summer, but was never laid up until eight weeks before admission. About that time, while working at his trade, he was exposed to two rain-storms. This increased his cough, and his expectoration was more abundant. He had muscular pains, and felt much indisposed. Two weeks later he fell off a 'board-float' into the river, and the effects of this, added to his previous unwell state, laid him up.

"His symptoms were repeated chilliness, followed by fever, languor, general weakness, loss of appetite. His sputa were yellow, and abundant, but of late he has expectorated but little. Has never had night-sweats; but lays stress on the fact that his breathing grew 'shorter and shorter.' While sick he had good attention, and the impression was that he had inflammation of the lungs.

"On the day before Christmas he thought himself able to work during the sunny hours, and made the attempt, but found himself too weak and short-breathed to continue on.

"On admission, the patient looks anæmic; he is very weak; his respirations are labored; decubitus is on the right side, with the shoulders rather elevated; there is little or no cough.

"Temperature 99°; pulse 110; respiration 40; urine high-colored, acid, specific gravity 1.028, non-albuminous.

"Physical signs—metallic cough and respiration, and comparatively imperfect succussion at the lower portion of the right lung posteriorly. Of all the phenomena the metallic-ringing cough is the most distinctive; percussion note is tympanitic from the upper part down posteriorly, not markedly so at apex, though here even more than at the apex of the left side.

"He was ordered tincture of cannabis indica, gtt. xx every third hour, quinine, gr. x daily, brandy, and beef-tea.

"A few days after admission, his pulse was 112, temperature 98°, respiration 60.

"There was crackling with coarse respiration posteriorly, left side, and at middle part anteriorly, and towards the sternum was distinct metallic respiration, especially at the left edge, and transmitted across from the right side. The heart was pushed over to the left axilla. The other signs present on the day of his admission were unchanged. The patient was covered with beads of sweat, laboring hard at each inspiration, and, as the difficulty was increasing, aspiration was decided on. The entrance to the chest was effected posteriorly, between the fourth and fifth ribs, over the point of greatest tympanitic resonance and amphoric breathing. As soon as the cavity of the chest had been entered, air rushed out with a whistling sound; the aspirator was applied and pumped for a few minutes, when a yellowish fluid, of creamy consistence, showed itself, and was drawn off to the amount of nearly one quart.

"The operation gave him much relief, and his expression was that a great load had been taken off his chest. The respiration was more free, less labored, and he sat up in bed more comfortably than before the operation.

"The relief, however, was but temporary, and the patient died forty-eight hours after the operation."

The specimens which here lie before you were removed some eleven hours after death. It was noted that the emaciation was not marked, and that the thorax on being opened allowed of a free escape of air. The right lung, you notice, is collapsed, and the pleura on both its costal and its pulmonary surface is covered with a thick layer of tough lymph.

The lung is reduced in size, and there is a large cavity in its upper lobe, while the lower lobe is filled with cheesy masses.

The left lung is somewhat torn, due to the adhesions which existed posteriorly and at its apex; the upper lobe is infiltrated with the same cheesy masses as on the right side, only more firm, perhaps, though some to the touch feel quite soft.

The pleura on this side looks to be covered with very minute miliary-looking bodies, which appear almost like granulations; yet to the touch they feel as if immediately beneath the surface.

The serous membrane of the heart is covered, here and there, with lymph, and a few bands exist between the opposing surfaces, but these are readily broken down. Aside from the liver, which is enlarged and somewhat congested, the other viscera look normal.

In this case, you see, I employed *cannabis indica* first, and from this I have known relief to the dyspnoea, but the harassing symptom was far more influenced by the use of the aspirator; and, in conclusion, I call your attention to the value of this instrument in assuaging the distress of cases in which you are forced to despair of a cure.

ORIGINAL COMMUNICATIONS.

ON LIGATURES: AN ATTEMPT TO DECIDE ON THE BEST MATERIAL FOR THE LIGATION OF ARTERIES.

WITH EXPERIMENTS.

BY JOHN R. HAYNES, M.D.,
Philadelphia.

(Concluded from page 568.)

ANIMAL LIGATURES.

IT has long been the hope of surgeons that some form of ligature might be obtained which could be left in the wound without creating suppuration, and over which union by first intention might take place. We have seen how the advocates of short silk ligatures were disappointed by the results of experience: finding that disturbance of some sort almost invariably ensued from their use. During the present century a series of ligatures composed of various animal tissues has been brought into notice, under the belief that the peculiarity of their composition would not only

render them innocuous, but would also lead to their absorption, and thus prevent all chance of their acting as foreign bodies. Hence it was supposed that union of wounds by adhesion would occur much more frequently than under the employment of the common silk ligature; for the latter was accused as the fruitful source of prolonged suppuration, and also (from the fact that in the process of extrusion it necessarily divided the artery) of secondary hemorrhage. The latter accident, it was further thought, would cease to torment both surgeon and patient, for it was confidently advanced that animal ligatures would not cause division of the artery, because of their speedy removal by absorption.

The celebrated Physick, to whom we are indebted for so many real advances in the art of surgery, was the first to employ the animal ligature in actual practice. He used strips of chamois leather, rolled into a round hard cord between two marble slabs. In 1813, Dr. Thomas Young, of Edinburgh, mentioned catgut as a substance worthy of trial for ligation of arteries,* and, indeed, we find proofs of the use of the same material for sutures in the writings of Rhazes (A.D. 900), and of Albucasis (who flourished about two centuries later). Notwithstanding these facts, no doubt exists that Physick, in 1814, originated the use of the animal ligature. Unfortunately, no record of the results obtained by him remain, although it is said that his example was followed by Dorsey.

Dr. H. G. Jamieson, of Baltimore, used ligatures made of strips of buckskin for a number of years. He never published a detailed account of his cases, but it is said that the ligatures were never known to come away, and that the wounds generally healed by first intention. In experiments on animals he found that buckskin ligatures were sometimes encapsulated and sometimes absorbed.†

Various other tissues have been employed: thus, Hartshorne, of Philadelphia, used strips of parchment, and Eve, of Kentucky, the dried tendons of the deer. Manec, of Paris, made trial of filaments of nerves and tendons, but found that the wound never healed by first intention without the subsequent extrusion of the ligatures.

In 1817, Cooper introduced catgut into practice. Porta, in 1845, published the results of his experience with this substance, and finally Lister, of Glasgow, in 1869, revived its use, and taught a peculiar method of preparing it.

CATGUT LIGATURES.

Experiments on Animals.—Sir Astley Cooper recites his experiment in the following words:

"I tied the carotid of a dog with catgut ligature [prepared by soaking in water at 100° F.]; in a fortnight after, I killed the animal, and found that the ligature had not been dissolved, but that it had cut its way through the artery, and was situated in a cyst like that which is found around a ball, between the divided ends of the vessel, in a quiescent state."‡

* Introduction to Medical Literature, Edinburgh, 1818, p. 424.

† Cooper's Surgical Dictionary, Amer. edit., art. Ligature.

‡ Cooper's Lectures, 1829, p. 168.

Porta made numerous experiments with catgut on the arteries of various animals. In eighty experiments to test the frequency of absorption, the ligature was absorbed in thirty-three instances, and in several others very much softened. In some cases it became encysted, or, becoming dry and stiff, "it was left bare in the layers of the cellular tissue." Occasionally an abscess formed, and the ligature was thrown off. Out of two hundred and thirty-six experiments to test the frequency of this occurrence, abscesses formed in twenty-six. "Catgut," says Porta, "differs from other ligatures, as it does not always divide the internal wall the moment the knot is formed, but, becoming lax by the process of softening, it sometimes allows the artery to reopen. This, however, does not interfere with the success of the operation when the relaxation is gradual, and the internal plug is formed in time."*

Experiments of the Writer.

Exp. XXIV.—The carotid of a cat was tied with non-carbolized catgut, and, one inch below, with carbolized catgut. The wound, which had been closed by a continuous suture of fine silk, healed by adhesion. In twenty-five days the parts were examined: no traces of the ligatures could be found. The vessel was occluded at and between the points to which they had been applied.

Exp. XXV.—The carotid of a cat was tied firmly with catgut (non-carbolized); the wound was treated as in *Exp. XXIV.*, and with the same results. When the parts were examined, forty-four days after, the ligature was found *in situ* around the remains of the artery; it presented no appearance of absorption. [See Experiments VIII., XIII., and XXII.]

Results of the Use of Catgut on Man.

Cooper, in 1817, tied the femoral of an old man, for popliteal aneurism, with catgut which had been soaked in warm water. The wound healed, without suppuration, in four days, and nothing was seen of the ligature. He subsequently employed catgut in three additional cases of aneurism, in all of which "it came away by suppuration and ulceration." From the result of these cases and the experiment related above, Sir Astley concluded that catgut ligatures were not at all superior to common ones, and abandoned their use.

Norman, of Bath, England, tried catgut in two cases of aneurism, but long and troublesome suppuration ensued in both instances.

Porta relates eleven instances of ligation of arteries in their continuity by catgut. In only one of these cases, an instance of ligation of the carotid, can the result be said to have been perfectly satisfactory. In no case was the ligature seen to come away, but the artery was found divided in all instances in which the patient died after a sufficient interval had elapsed.

Manec, of Paris, in some cases in which he tried catgut found that it was always extruded by suppuration in cases where union by adhesion occurred. No details of the cases are given.†

The following table gives all the recorded cases

in which catgut (non-carbolized) was used in ligating arteries in their continuity. In all the cases the disease requiring the operation was aneurism.

NO.	OPERATOR.	ARTERY TIED.	HISTORY OF THE CASE.
1	Porta. ^a	Carotid.	The patient did well, but the wound did not unite till two months had passed.
2	Porta.	Carotid.	Wound healed soundly and permanently in four days.
3	Porta.	Carotid.	Death in forty hours.
4	Porta.	Brachial.	The patient died in sixty-five days after operation, of pneumonia, "probably pyæmic." The wound had suppurated till death, but the autopsy showed this to be superficial.
5	Porta.	Brachial.	Wound did not close for a month.
6	Porta.	Femoral.	Wound suppurated until death, which occurred on the seventeenth day, from gangrene.
7	Porta.	Femoral.	Death in fifty-five hours.
8	Porta.	Femoral.	Death in ten days, from encephalitis. External wound healed, but small abscess found beneath fascia lata.
9	Porta.	Ext. iliac.	Death on the third day, from encephalitis.
10	Guerini. ^b	Brachial.	Wound did not close for five weeks.
11	Guerini.	Post. tibial.	Tumor laid open, causing a large wound, and catgut applied. Wound closed in six weeks.
12	A. Cooper. ^c	Femoral.	In this man, who was eighty years old, the wound was closed with adhesive plaster, and, when examined on the fourth day, was found perfectly healed.
13	A. Cooper.	Femoral.	"The catgut came away by suppuration and ulceration as in common cases."
14	A. Cooper.	Femoral.	
15	A. Cooper.	Femoral.	
16	Norman. ^d	Femoral.	The wound suppurated for six weeks. Ligature was not seen to come away, but operator thought it did.
17	Norman.	Femoral.	Very long in healing.
18	Crampton. ^e	Com. iliac.	Pulsation returned at fiftieth hour, and so far increased as to justify the suspicion that the ligature had softened and given way. On the eighth day the ligature, the ends of which had been left hanging from the wound (not cut short, as in the other cases), came away. On the tenth day, the man died in less than a minute, from hemorrhage from the distal end of the artery. On examination, internal and middle coats divided. An opening existed in external coat, which communicated with abscess. The operator observes, "It appeared that the ligature had been dissolved by the heat and moisture of the wound, and thrown off before the obstruction of the artery or the coagulation of blood in aneurismal sac had been completed. It further appeared that the dissolution of the ligature had caused a small abscess in the place which it occupied."

^a Porta on the Pathological Alterations of Arteries, etc.

^b Ibid.

^c Cooper's Lectures on Surgery.

^d Norman, Med.-Chir. Trans., vol. x. p. 120.

^e Crampton, Med.-Chir. Trans., vol. xvi. p. 163.

Professor Agnew used catgut (non-carbolized) in two cases of amputation at the Pennsylvania Hospital. In one, some of the vessels were tied with catgut, and some with silk. The wound pursued the ordinary course, and the patient recovered. In the second case, catgut alone was used; the man died of pyæmia.

CARBOLIZED CATGUT.

Preparation.—Lister directs that catgut be prepared by soaking it for at least four hours in an oily solution of carbolic acid (one part to five of olive oil to which a very small quantity of water

* Op. citat., pp. 21, 22.

† Lisfranc on the Obliteration of Arteries, Paris, 1832.

has been added). At the beginning of an operation the catgut may be transferred to water.

Mr. Lister advocates carbolized catgut very strongly for the ligation of arteries. He formerly employed it for sutures also, but has now abandoned it for that purpose; why, he has not informed us. Perhaps the almost invariable suppuration which followed its use as a suture, in the writer's experiments on the lower animals, may throw some light on this point. The ingenious inventor of the antiseptic system seems to base his support of this variety of ligature on the following experiment, for in no place has he published any cases bearing on the subject:

The carotid of a calf was tied with two ligatures of animal tissue at an interval of one-half inch, the sheath of the vessel being left intact between them. The cardiac ligature was a threefold cord, composed of strips of peritoneum of ox. The distal ligature was a double one of minikin catgut. Both ligatures had been soaked for four hours in a saturated watery solution of carbolic acid. The wound was brought together with copper sutures, and antiseptic dressing used. In ten days dressings removed, and wound found entirely healed. On dissection, in thirty days, the site of each ligature was occupied by a ridge continuous with the external coat of the artery. Under the microscope this was found to be composed of fibrous tissue. The author considers that these ridges were *the ligatures which had undergone organization*. The vessel was obliterated in and between the position of both ligatures.*

Experiments of the Writer with Carbolized Catgut.

The following was a repetition of Lister's experiment:

Exp. XXVI.—The right carotid of a goat was tied with a cord composed of three pieces of carbolized catgut, and one-half inch above, leaving the sheath intact between, with two pieces of "minikin" gut. Both ligatures had been soaked four hours in a saturated watery solution of carbolic acid; and, indeed, carbolic acid was used according to Lister's directions all through the experiment. The wound was closed with silver sutures. On the tenth day, the dressings were removed and the sutures taken out. The wound was perfectly healed. On the thirtieth day the parts were examined. The lesser ligature had disappeared, and the artery was not constricted at its site; a partially adherent clot occupied the vessel down to the lowest ligature, which had caused the walls of the vessel to be absorbed within its noose. A thin layer of organized lymph, continuous with the edges of the vessel, covered the sides of the ligature. Above the ligature, the vessel was not obstructed except by the clot just mentioned; below the vessel was entirely obliterated for some distance. The ligature itself was slightly swollen and softened.

Exp. XXVII.—A coil composed of eighteen inches of carbolized catgut was placed in the peritoneal cavity of a cat. On examination in seventy days no traces of the catgut were found except a few stained lines on the omentum.

Exp. XXVIII.—A coil composed of twelve inches of carbolized catgut was placed under the skin of a cat's shoulder, and the incision closed by sutures of the same material. It healed by first intention; on dissection in five days the catgut was found floating in pus.

Exp. XXIX.—A piece of carbolized catgut two inches long was inserted under the integument of a cat; was extruded by suppuration on the fourth day.

Exp. XXX.—The biceps extensor of a cat's leg was surrounded with carbolized catgut subcutaneously. No disturbance ensued, and on dissection in seventy-three days only a shred of the catgut could be found.

Exp. XXXI.—The carotid of a cat was ligated with carbolized catgut, and the wound closed with a continuous suture of the same material. Profuse suppuration ensued, and healing was not completed till the twentieth day. In thirty days a dissection of the parts revealed the ligature in exactly the same condition as when applied, encapsulated, and enclosing the remains of the artery.

Exp. XXXII.—Same as Experiment XXXI. The wound, which was closed with silk sutures, healed by first intention. On examination in thirty-two days the vessel was occluded, and no trace of the ligature remained.

Exp. XXXIII.—Same precisely as Experiment XXXI., with a like result.

Exp. XXXIV.—Same precisely as Experiment XXXI., with a like result.

Exp. XXXV.—Same as Experiment XXXI. Wound closed with carbolized catgut sutures; slight suppuration ensued. On dissection in sixty-three days, no trace of ligature; the artery was adherent to its sheath, and slightly indented at point of ligation. It was occluded for the space of one-sixth inch.

Exp. XXXVI.—The carotid of a cat was tied with carbolized catgut, and the wound closed with sutures of same material. "Antiseptic" dressings were applied. On dissection after six days pus was found flowing from the wound; the knot of the ligature projected into an abscess bounded by the sides of the wound. The noose of the ligature was surrounded by healthy tissue, and no sign of absorption existed.

Exp. XXXVII.—The carotid of a cat was tied in two places with carbolized catgut, and divided between the ligatures; the wound was closed by a continuous suture of fine silk, and healed by adhesion. On dissection after thirty-six days the ends of the vessel were found united by a band of organized lymph. The ligatures, surrounded by a thin capsule, were *in situ*, but barely visible from the progress of absorption.

Exp. XXXVIII.—The carotid of a cat was tied with a strip of bullock's peritoneum (not carbolized). The wound, which was closed by silk suture, healed by adhesion. In sixteen days the parts were examined. The ligature had entirely disappeared, except the knot, which was *in situ*. The artery was occluded.

Exp. XXXIX.—A piece of carbolized catgut (as thick as saddler's silk) was passed under a portion of the skin of the writer's arm, and the ends tied together externally. The parts were protected by adhesive plaster. On the eighth day one end of the catgut dropped off, and slight traction at the other end sufficed to bring away a portion of the gut that had been under the skin. This portion presented a nibbled and macerated appearance, and on taking it between the thumb and the finger slight pressure was enough to disorganize it. A drop or two of pus exuded from each orifice, and the track of the catgut presented to the finger the sensation of a hard band, as if it were occupied by lymph.

RESULTS OF THE USE OF CARBOLIZED CATGUT IN MAN.

The following table gives a short account of all the recorded cases in which arteries have been ligated in their continuity with this material:

* Lancet, April 3, 1869, p. 454.

NO.	OPERATOR AND REFERENCE.	AGE.	ARTERIES TIED.	DISEASES FOR WHICH TIED.	HISTORY.
1	T. Holmes. Lancet, 1872, p. 69.	50	Subclavian and carotid.	Innominate aneurism.	The vessels were tied tightly. Some small vessels in the subclavian wound were tied with silk. Continuous catgut suture was used. Dressing antiseptic for one day, when the patient disturbed the bandages. The carotid wound suppurated a little, but finally closed on the thirteenth day. The subclavian wound contracted to a short sinus, which remained till death, which occurred on the fifty-fifth day, from inflammation of sac. Autopsy.—“On the carotid, lying between it and vein, there was a lump something like a small gland, and the artery was constricted. When laid open, its calibre was found to be interrupted merely by a thin stratum of partly decolorized clot. A distinct ridge, or transverse mark, indicated the position of the ligature, and below this, between it and the heart, at about one-eighth of an inch distant, were two very minute apertures in the internal coat. One did not lead through walls of vessels; the other led into the small lump above mentioned, which was a mass of cellular tissue and debris of blood-clot, in which no ligature could be found, though carefully looked for. Nor was there a trace of the ligature in any other part. In the subclavian, also, there were no remains of the catgut ligature. This artery was not interrupted in its continuity in the place where it had been tied, but was completely closed by a diaphragm less than one-fourth of an inch thick.”
2	C. Heath. Lancet, July 27, 1872, p. 108.	48	Subclavian and carotid.	Aortic aneurism.	The wound was dressed with cotton-wool. When opened, on eighth day, it was found entirely and permanently healed by first intention. Patient improved greatly, and, after leading a very intemperate life for four years, died from bursting of the aneurism in front of the sternum. On autopsy, the tumor, which had been mistaken for innominate, was found to be entirely aortic.
3	Thomas Bryant. Med. Times and Gazette, July 27, 1872, p. 87.	33	Subclavian.	Innominate aneurism.	A large vein was wounded and ligated. On the fourth day, slight bleeding from the wound; checked by ice. On the fifth day the dressing (cotton) was removed. Wound discharging broken-down blood from only spot not healed.
4	Stocks. Liv. and Manch. Med. and Surg. Rep., 1873, p. 127.	42	Subclavian.	Axillary aneurism.	The artery was tied in its third part with a double ligature. Antiseptic treatment. On sixth day, bloody discharge from wound. Tenth day, wound slightly opened; no reparative action. Twelfth day, man died of asthenia,—probably septicæmia, though the author confesses that he cannot satisfactorily account for his death. Autopsy.—One lung partially solidified. The ligature had disappeared. There was a deep constriction in the artery at point of application. On opening the vessel, it was found that its coats had not been injured. A firm clot, one and a half inches long, filled the proximal side. On the distal side the tumor was close to the site of ligation.
5	Bernard. Am. Lancet, Sept. 1872, p. 482.	25	Common carotid (left).	Hemorrhage (from fauces).	Antiseptically treated. In nineteen days the wound was healed, except a small sinus, through which the knot of the ligature, as the operator supposed, was discharged. At the expiration of fifty-nine days there was still slight oozing from centre of wound.
6	Bernard. Op. citat., p. 481.	39	External iliac.	Femoral aneurism.	Antiseptically treated. In six days the edges of the wound were extremely inflamed: “almost sphaceloid.” The carbolic dressings were removed, and opiates applied. After thirty-nine days, thick, purulent matter still discharging from the wound. In fifty-three days, wound entirely healed. It is not stated whether or not the ligature came away.
7	Atchley. Lancet, April, 1870, p. 585.	41	Femoral.	Popliteal aneurism.	The incision “was quite healed by the twentieth day.”
8	James Spence. Lancet, June 5, 1869, p. 773.		Common carotid (right).		The ligature was tied with three knots. The patient did very well until next day, when, after taking a drink of milk, he vomited, then immediately became comatose, and paralyzed on the left side. Death ensued on third day after operation. On autopsy, it was found that the vessel was not constricted at the point where the ligature had been applied. Some loose, pulpy material was found. On examination, this proved to be the ligature, which had separated at a point opposite the knot. A large embolus obstructed the right middle cerebral artery. The author supposes that the vomiting caused rupture of the ligature, after which the clot was swept up by the blood-current.
9	Jessop. Lancet, Nov. 30, 1872, p. 776.	22	Brachial.	Traumatic aneurism at head of elbow, size of walnut.	The tumor was laid open, and the artery secured by means of two carbolized catgut ligatures, placed on either side of a minute opening at bottom of sac. Antiseptic treatment: “Wound healed directly,” and patient went home, cured, on twelfth day.
10	Lund. Lancet, August 5, 1871.	42	External iliac.	Femoral aneurism.	Antiseptic treatment. On eighth day, wound healed, except at one spot. No pus secreted. Twenty-sixth day, patient sitting up.
11	Watson. Ranking’s Abstract.		External iliac.	Inguinal aneurism.	The patient died nine weeks after, from hemorrhage. A silk ligature was applied to abdominal aorta, sixty-five hours before death. On autopsy, the external iliac was found completely divided, and nothing was seen of the ligature.
12	Nankinell. Lancet, Feb. 10, 1872, p. 187.		Femoral.	Popliteal aneurism.	Antiseptic treatment. Wound suppurated, and healed in thirty-one days. Nothing said of ligature coming away.
13	T. Smith. Lancet, Nov. 23, 1872, p. 741.	30	Femoral.	Popliteal aneurism.	Antiseptic treatment. Wound suppurated, and was not entirely healed after a month had passed.
14	T. Smith. Lancet, Oct. 13, 1872, p. 549.	40	Femoral.	Popliteal aneurism.	Antiseptic treatment. Eighth day, sutures removed; no pus. Ninth day, wound healed, except at lower part, where lint was inserted.

NO.	OPERATOR AND REFERENCE.	AGE.	ARTERIES TIED.	DISEASES FOR WHICH TIED.	HISTORY.
15	C. J. Gibbs. Brit. Med. Jour., Sept. 24, 1870.	35	Femoral.	Popliteal aneurism.	Antiseptic treatment. Eighth day, united by first intention, except that a slight superficial discharge existed, which continued fourteen days. Seven weeks after, man died of phlegmonous erysipelas of same limb. Autopsy.—Large mass of hardened lymph surrounded wound. The artery was "narrowed and compressed" at point of ligation. Its coats were perfect. Its calibre was obstructed by organized clot. No traces of ligature were observed.
16	Holden. St. Barth. Hosp. Rep., 1872, p. 187. Am. Jr. Med. Sc., July, 1873, p. 194.		Femoral.	Popliteal aneurism.	Antiseptic treatment. Slight pulsation was noticed in the aneurism on the following day, and became marked one day after. The wound suppurated acutely, and on the eighth day after the operation an attack of bleeding took place, which proved instantly fatal. On autopsy, no trace whatever could be found of the ligature. The aneurism was found to have burst, and there was a small, jagged perforation in the artery at the seat of the ligature, through which the hemorrhage had taken place. No description is given of the state of the artery, beyond this: that the two internal coats had been fairly divided by the ligature, and there was no clot in the vessel.
17	Bickersteth. Liv. and Manch. Med. and Surg. Rep., Am. Jour. Med. Sci., Oct. 1873, p. 497.	73	Gluteal.	Traumatic aneurism.	Antiseptic treatment. Patient left hospital, cured, in a month.
18	Watson. Glasgow Med. Jr., May, 1870, p. 341.		Femoral, and afterwards external iliac.	Popliteal aneurism.	Two years previously, the femoral had been tied for the same disease, with a silk ligature. The operation had been successful, and the patient had recovered perfectly, but a secondary aneurism made its appearance in the position of the first. On September 10, 1869, the femoral was tied in Hunter's canal with carbolized catgut. Silk sutures were introduced, but not tightened for some hours, in order to allow the escape of the serum. The aneurism still continued to pulsate, and on the 15th of September (five days after first operation) the external iliac was tied, antiseptically, with carbolized catgut. The skin and areolar tissue sloughed around this wound, leaving it clear and healthy. September 17, the sac, which had stopped pulsating, sloughed, both wounds granulating without suppuration. October 30, hemorrhage from sac, and limb amputated. November 15, man died. Nothing had been seen of ligatures. On autopsy, both wounds were granulating from the bottom. The arterial system was diseased. The left external iliac presented no appearance indicating that it had undergone ligation. Its lining membrane was perfect. Below the position of ligature it was somewhat reddened. <i>The vessel was entirely empty, and its calibre not diminished.</i> The calibre of the femoral, at the position where the silk ligature had been applied, two years previous, was obliterated. Where the first catgut ligature had been applied to the femoral in Hunter's canal, no traces of the ligature were found. The calibre of the vessel at that point was not diminished, but it was filled with adherent clot. The coats were deeply reddened.

Summary.—Of the eighteen cases recorded in the preceding table, twelve recovered and six died.

Healing by first intention occurred in one case only (No. 2). In one case the knot of the ligature was discharged through a sinus, which remained after the rest of the wound had healed (No. 5).

Secondary hemorrhage occurred in four cases, or 22.5 per cent.; it was readily checked in two (Nos. 3 and 4), and in two (Nos. 11 and 16) proved fatal. Premature softening of the ligature occurred in three cases (Nos. 8, 16, and 18), or in 16¼ per cent.

Cause of Death and Condition of Vessel.

In Holmes's case (No. 1), the man died from inflammation of the sac. The vessels were closed merely by thin diaphragms. In Stock's case (No. 4), the cause of death was obscure, but seems to have been septicæmia. The vessel was closed by a firm clot.

In Spence's case (No. 8), death occurred from embolism of the middle cerebral artery, caused by the premature relaxation of the ligature on the second day. The artery was not constricted.

In Watson's first case (No. 18), the man died of hemorrhage from the sac. The femoral artery was not constricted, but was filled with adherent clot, which had probably formed not long before death.

The iliac was not obstructed, and presented no traces of having been ligated. In his second case (No. 11), death occurred from hemorrhage at the point of ligation, and the artery was completely divided.

In Holden's case (No. 16), death occurred on the eighth day, from hemorrhage at the point of ligation. A small jagged perforation existed, and there was no clot. In cases of this kind it is difficult to think that the ligature is absorbed: it seems more probable that in its broken-down condition it is discharged. It might readily be overlooked.

Holmes, after mentioning Watson's and Holden's cases, says, "I have heard of another case in which a carbolized catgut ligature softened and allowed the recurrence of pulsation."* I can find no record of the case referred to.

In amputations, carbolized catgut has been frequently used by Lister† and others, but no record of their cases has been published, with the exception of two by Mr. Holmes:

1. Amputation of fore-arm. The wound healed by first

* Lancet, Sept. 13, 1872, p. 450.

† Dr. Charles T. Hunter informs me that he carefully compared the results obtained by Watson and Lister in their respective wards in the Glasgow Infirmary. The one used *no* antiseptics, and the other employed his peculiar method in every operation. There was no apparent difference in their success.

intention, excepting a small hole, which continued to discharge foul pus till death, which was caused by chronic pyæmia.

2. Amputation of thigh; death in six days. On opening the stump, the ligature which had been applied to the femoral was found softened and partly absorbed. It came away with very slight traction. Scarcely any coagulum was found in the vessel. Of this case, Holmes observes, "I am not certain that secondary hemorrhage would not have occurred, had the patient lived."*

Mr. Spence refers to a case of amputation of the thigh, of which I can discover no other record, in which hemorrhage occurred from the slipping of a carbolized catgut ligature from the femoral artery.†

CONCLUSION.

In the preceding pages the writer has endeavored to present, so far as his ability extends, a plain and unbiassed statement of our knowledge in regard to the more important materials employed for ligatures. It is hoped that sufficient information has been accumulated to enable the reader to decide for himself which of these substances is the best suited to its purpose.

Catgut prepared by soaking in water has been abandoned as a ligature. It was found to possess all the disadvantages of silk, besides some peculiar to itself. It divided the vessel, was sometimes softened prematurely, and did not generally remain encysted when healing of the wound occurred over it.

Carbolic acid, it has been maintained, has the power of greatly changing the properties of catgut. "By applying a ligature of animal tissue antiseptically upon an artery," says Lister, "we virtually surround it with a ring of living tissue, and strengthen the vessel where we obstruct it. . . . For my own part," he continues, "I should now without hesitation undertake ligature of the innominate, believing it would prove a very safe procedure."‡

The only apparent ground for Professor Lister's lively faith lies in the experiment on the calf,§ before detailed. In the writer's repetition of this experiment, one of the ligatures had disappeared, and the other (the largest) was in nearly the same condition as when applied, presenting no signs of organization. Ever since the time of Porta, it has been known that catgut could be absorbed; but that the vital fluid could enter into its substance and transform it into living tissue, though indeed "a consummation devoutly to be wished for," is highly improbable, and the writer thinks sufficiently disproved by his experiments.

Mr. Holmes adopts a more moderate tone; from his own case, he concludes—

"That arteries may be tied as securely with carbolized catgut as with silk; that such ligatures melt in the wound without being discharged from it; that an artery under such circumstances may preserve its continuity, while its tube is obliterated at the part tied; thus, that

the chief risk of secondary hemorrhage after ligation is obviated."||

The cases recorded prove that these qualities cannot be depended upon. The ligature melts away in the wound, but it may melt too rapidly, as we have seen in three out of the eighteen recorded cases. This may lead in some instances to directly fatal results, as in Spence's case, or as in Holden's and Watson's cases. The ligature may remain long enough in place to set up ulcerative action in the external coat, and yet not keep the internal coats long enough in contact to insure adhesion. Is it safe to intrust our patient's life to a ligature which may become completely softened in less than eight days?¶

Why in some cases catgut should become softened so rapidly, it is difficult to explain, just as we do not understand why it sometimes becomes encysted and is sometimes absorbed. It may be that in some cases the secretions of the wound have a greater corroding power than in others.

That the chief risk of secondary hemorrhage is avoided is, unfortunately, an assertion not warranted by experience; for, as we have seen, this was the cause of death in two instances, or one-ninth of the recorded cases. Out of the six hundred cases ligated in the ordinary manner recorded by Porta, who is noted for his accuracy, but one-twentieth died of this accident.

Carbolic acid seems to render catgut more irritating to the tissues; for, as has been seen, the majority of experiments in which carbolized catgut was inserted under the skin, or used for sutures, were attended with suppuration. This is in marked contrast with silk.

With *silver* the results of practical experience have proved so unsatisfactory in operations on arteries in their continuity that probably it will be rarely used hereafter as a ligature. Thus, three out of the eleven tabulated cases perished of secondary hemorrhage. Even in the lower animals, the writer's experiments have shown that it generally divides the vessel.

Howard's theory, that this result would not ensue if the silver were applied so as only to diminish the calibre of the vessel, is not sustained by the results of the case on which he operated. Porta's experiments with the slack silk ligature also tend to disprove it. In one (No. XVIII.) of the writer's experiments, the application of a silver ligature, after Howard's plan, was followed by the formation of a "false aneurism."

In other operations, the use of silver must be exceedingly inconvenient, as any one may test for himself by attempting to tie a vessel with it. It has no compensating advantages. This statement will be borne out by an examination of the cases given.

It seems that metallic ligatures were first suggested from the idea that balls when lodged in the tissues were generally harmless. That this idea is unfounded is proved by the observations of Hutin, chief surgeon of the Hôtel des Invalides, Paris. He examined four thousand men in five years. Two hun-

* Lancet, Nov. 1872, p. 564.

† Spence, loc. citat.

‡ Lancet, April 3, 1869, p. 455.

§ It should be remembered that at the time Lister wrote the article quoted from, carbolized catgut had never been employed on man.

|| Loc. citat.

¶ See Experiment XXIX.

dred and twelve of these had bullets, or similar substances, lodged in their bodies; out of which number only twelve suffered no inconvenience.

In the writer's experiments in which pieces of silver were inserted in the tissues, it seems that the chief cause of the suppuration which generally ensued was the inflexibility of the metal, so that it could not accommodate its shape readily to the movements of the parts.

Lead has not this disadvantage; but, as a ligature, there is no reason to believe that it would be superior to silver. It is to be wished, however, that we had more clinical experience on this point.

Silk has been accused by Simpson of delaying the union of wounds, and rendering pyæmia more frequent.

"It rapidly imbibes from the surrounding tissue," says Simpson, "animal fluids into its substance; and these dead fluids speedily decompose and render the threads morbidly poisonous and irritant agents to the contiguous living tissues."*

These assertions—for they are nothing more—have generally been denied by practical surgeons. Porta's experiments, which are confirmed by those of the writer, prove that, in the lower animals, silk is generally unirritating.

Practically, the plan of burying silk ligatures in the tissues has not been found successful, as a general rule; but it remains yet to be proved that the presence of the ligature, as now used, is injurious. In fact, some surgeons maintain that the thread acts beneficially, by draining the deeper parts of the wound.

The healing of large wounds by first intention is rare, but it sometimes occurs, in cases where silk is used. Thus, Dr. Charles T. Hunter has furnished me with the details of a case in which he excised the breast, using silk ligatures and sutures; union occurred by first intention, except at one spot, from which about half a drachm of pus was discharged, because a suture had been allowed to remain too long in place.

As has been shown, secondary hemorrhage is less common in operations on arteries in their continuity, where silk is used, than where the other materials are employed; and in other operations it is quite uncommon.

From a consideration of the preceding facts, it is believed that silk is the safest, and therefore the best, material yet discovered for the ligation of arteries.

THERAPEUTIC NOTES.

"KOUMISS."—The following formula is that of Dr. Townsend, of Cork: "R. New milk, one quart; good thick milk (sour?) or fresh buttermilk, one noggin [a noggin is one gill]; white sugar, three or four lumps. Mix thoroughly till the sugar is dissolved; keep in a warm place in a jug ten hours; pour from jug to jug till quite smooth; bottle in soda-water bottles, velvet corks, tied down; let remain in a warm place twenty-four hours in summer, thirty-six in winter. Shake well before taken.

Its fermentation is the test of excellence. Drink in quantities."—*A. Bigelow, in Boston Medical and Surgical Journal.*

TREATMENT OF ECZEMA PAPULOSUM.—M. Bazin uses the following in cases of this form of eczema accompanied by dyspepsia, etc.:

R Sodii bicarb., ʒiʒi;

Syrupi saponariæ, fʒviij.—M.

Sig.—Tablespoonful morning and evening.

Externally the following:

R Boracis, gr. xxx;

Glycerinæ, ʒiiss;

Aquæ destillat., ad fʒx.

This lotion is to be applied, rather warm, morning and evening, and the skin is afterwards to be powdered with starch. Occasionally starch-baths—two pounds of starch to the bath—are found to give relief.

NEW MODE OF ADMINISTERING RAW MEAT.—Dr. Yvon gives the following method of preparing a palatable mixture having all the virtues of fresh meat while possessing an agreeable taste:

Raw meat (fillet of beef), 250 parts,

Sweet almonds (charred), 75 "

Bitter almonds, 50 "

White sugar, 80 "

The mixture is to be rubbed slowly up in a mortar until a homogeneous paste is obtained, adding from time to time a sufficient quantity of water to give a proper consistency. The amount of water may be so varied as to give a solid or a liquid mixture. The liquid, which is in the form of an emulsion, will slowly settle, but may easily be mixed again by shaking lightly. It may be preserved unchanged for a long time if kept in a cool and dry place. In order to render it more nourishing, the yolks of one or more eggs may be added.

TREATMENT OF ANTHRAX BY SUBCUTANEOUS INCISIONS.—M. Guérin recommends this mode of treatment as preferable to that ordinarily practised, which involves the exposure to the air of the wounds made. A puncture is made through the summit of the tumor, and then the various crucial incisions are completed subcutaneously without further opening. By this method of operation the interminable suppuration often observed after operation for anthrax is avoided, as well as the not infrequent hemorrhages and also the large eschars very apt to result from the usual procedure.

After the incision is made as above, no further treatment is necessary excepting the use of poultices. Accidents from infection are rare. The incision may be made as soon as induration is established.

INTERTRIGO.—As chafing of the skin of various parts of the body is quite common at this time of the year, the following formula may prove timely:

R Bismuth. subnitrat.,

Glycerinæ, aa ʒij.—M.

A few drops of tincture of cochineal may be added to give the mixture a flesh-tint, and a little water may be added in warm weather. It may be smeared over the opposing surfaces after they have been carefully cleaned.

ICE IN BLENNORRHAGIC CYSTITIS.—In cases of blennorrhagic cystitis accompanied by painful erections, etc., small ovoid pieces of ice introduced into the rectum just within the sphincter are found to give decided relief. The ice may be renewed every hour, and two or three applications will usually suffice to give relief. Little or no curative action, of course, can be expected.

* Acupressure, p. 23.

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EDITORIAL.

THE VISION OF MALTHUS.

NOT long since, we took occasion to lay before our readers some statistics showing that the average subsistence and means of comfort for the race were increasing. This it appears is true chiefly, if not solely, in what we may call the enlightened nations,—those which are in reality or in origin European. In India, on the other hand, the vision of the much-derided seer seems to be taking the grim outlines of a reality. It appears that the population of that country is now, for the first time within the historical period, rapidly increasing. Formerly, the constant wars between the numerous native princes, the deadly arts of the Thugs, the family broils, the secret practices of the poisoners, the suttee, the car of Juggernaut, and, above all, the universal practice of infanticide, kept down the population. The English rule has, however, closed most of these outlets, and the result is daily becoming more apparent. In Bengal the traditional population was 43,000,000, but a recent census has shown that there are at present 66,000,000 of inhabitants. This seems a cheering result to the philanthropist; but there is a dark side to the picture, and there are many reasons for believing that the national infanticide, to us simply an atrocious and worse than brutal crime, was really the outgrowth of a necessity and the result of that peculiar instinct of self-preservation which often leads masses of people to acts seemingly most foolish or wicked, but, in reality, safeguards against greater evils.

Already in many parts of India the population is as dense as anywhere in the world; the habits of the people, and the very structure of society, are insuperably opposed to change of locality. What is the result? The great mass of the natives are in the depths of poverty. According to a recent writer, one-fourth of the agricultural laborers in Bengal earn only ten shillings a month apiece.

Without further discussion, it is plain that the barest subsistence can alone be commanded by these laborers for their families. This subsistence is almost solely composed of rice. The ordinary price of this grain, in India, is one and a half farthings per pound; so that a laborer can purchase of it three hundred and twenty pounds with his month's wages. Let, however, the crop fail, and rice advance to five farthings a pound, and the laborer can purchase only ninety-six pounds. The advance is less than an English penny, but it reduces the purchasing power of a man's wages to less than one-third of the normal amount. Practically, this advance in the cost of rice has been found to mean actual, present famine,—men, women, and children starving in their hovels, dying by the way-side, perishing of hunger in the fields. Our notions of famine are that food is not in the country. But, under the stimulus of a higher price abroad, in India the sustenance may be streaming out of the sea-ports, whilst the people are dying for food in country and in city.

As a result of the increase of population under Christianizing influences, famines, which were formerly infrequent, have become frightfully common. Since 1857 there have been, in India, no less than four; some of them of great severity.

The remedy for famine which the native potentate applied was simply to let things right themselves,—to allow the people to die until the demand for food was decreased to the supply. The British government recently has introduced the Christian policy of feeding the starving. This, it is readily seen, must increase the evil in the long run, although giving relief for the present. Fools, it is said, rush in where wise men fear to tread; but we may venture an opinion that the trouble must be met and conquered by other means. Grafting a portion of European civilization upon an old civilization like that of India naturally leads to the bringing forth of bad fruit. Two diverse, unlike halves can rarely be joined into a seemly whole. The true remedy for India is, we believe, to be found in the complete supplanting of the Oriental civilization by a European civilization, so modified as to suit the exigencies of climate and of race. Let a habit of emi-

gration be established, so that there shall not be in one part of the country vast uninhabited jungles, and in another overcrowded fields; let rotation of crops be introduced, and the dangers of a dependence upon a single staple be insisted upon; let, in brief, a revolution of the Hindoo habits occur, and though during the transition-period enormous suffering must be endured, yet in the end, we believe, a complete new life and a reorganized society will be safely achieved,—a result without which Christianity will probably in India prove a failure.

CORRESPONDENCE.

BOSTON, MASS., June 4, 1874.

TO THE EDITOR OF THE PHILADELPHIA MEDICAL TIMES:

SINCE I left my native city I have roved considerably, and have had opportunity to become somewhat familiar with various localities. At present I am sojourning in Boston, and thus far have had sufficient "nerve and muscle to contend with New England climate and customs." The climate, to be sure, during the past three months, has been trying enough to one's constitution: in fact, we have had many just such disagreeable days as are not unfrequently encountered in your city in the spring. So far as the customs are concerned, if by this term one may include the treatment he is likely to meet with from the natives of this land of the Puritans, especially the doctors, I can truly say that nowhere could a stranger have been more kindly received than I have been. It may be true that the community here is conservative in its tendencies, and will not at first sight be "gushing" towards a new-comer, or admit him to full standing, but demands that he shall in some way show himself worthy of advancement. However, when once this demand has been complied with, I can affirm that, so far as our profession is concerned, every encouragement is offered by the older members to the younger.

The Massachusetts Medical Society, which began its yearly meeting June 2 in its usually quiet and unobtrusive manner, is not only the oldest, but also by far the largest, of the State Societies of our country, having been incorporated in 1781, and numbering at the present time some thirteen hundred members. It invites to, and seeks to include in, its membership, all properly qualified practitioners of legitimate medicine throughout the State; and any physician who is not a member is, with propriety, suspected as to the soundness of his professional character.

During the forenoon the members availed themselves of the opportunity to visit the two principal hospitals of Boston, and also the Brighton Abattoir, which is, says the last number of the *Boston Medical and Surgical Journal*, "perhaps the greatest triumph of the State Board of Health." It has, of late, become a popular

resort for consumptives, who are trying the benefit of drinking blood fresh from the slaughtered animals. As to its efficacy, a physician, several of whose patients have regularly indulged in this agreeable pastime, is reported to have said that as yet they had failed to derive any advantage therefrom.

At the Massachusetts General Hospital there was a surgical visit, with operations. Opportunity was also given to inspect the two new wards, the Warren and Jackson, which have been recently opened. They are thus described in the last report of the hospital: "These structures are modelled somewhat upon the plan of army field-hospitals, with such modifications as climate and greater permanency require. The dimensions are forty-five by fifty-five feet, by fifteen and a half feet high to the eaves. Frames and outside walls of iron; high-pitched trussed roofs, at apex of which are ventilators, ten feet square, with chimney-stacks in centre. They are connected with the main hospital by corridors. Warren ward is one story high, without interior divisions, forty-four feet square inside, sixteen feet high at walls, and twenty-two and a half feet high in centre; arranged for twenty beds, allowing about one thousand eight hundred and forty cubic feet of space to each bed." Windows are arranged upon three sides, and so open as to allow a circulation of air without a direct draught upon the beds. For heating-purposes, a chimney-stack is placed in the centre of the ward, on two opposite faces of which are open fireplaces, and on the other two open Franklin soapstone stoves. Steam radiators, hung beneath the floor, and supplied with fresh air from without, also assist in heating. "A glazed door opens upon a platform in the south front, over which is to be an awning in hot weather. Jackson ward is similar in construction and dimensions, excepting that the interior is divided into eight rooms, each twelve by eighteen feet, fifteen and a half feet high, containing three thousand cubic feet of space, and of sufficient size for two beds each. Each room has an open Franklin soapstone stove. The ward is divided by a centre and a cross corridor, twenty-one and a half feet high, which, as well as the rooms, are connected with the large ventilator in the roof."

At the City Hospital there was also a surgical visit, with operations. Of great interest was the exhibition of patients in the two tents that were spread in the yard. Several cases which, while confined in the walls of the Hospital, were *in extremis*, are fairly on the road to recovery since they began to camp out.

At 12 M. the Society met in the hall of the Lowell Institute, to listen to the reading of papers.

The first paper was by Dr. J. O. Whitney, of Pawtucket, who reported a case of dilated kidney in a patient 24 years of age. When three years old he had dysentery, and since then he has been subject to attacks of pain in the left lumbar region and in the neighboring part of the abdomen. When seen first by Dr. W., there was a tumor occupying the left side of the abdomen, and extending towards the right, beyond the median line. The patient was then in a very weak condition.

The diagnosis, arrived at with a good deal of difficulty, was hydronephrosis. The tumor was evacuated with the aspirator, and, after a few days, a second time; the fluid obtained at theappings confirming the diagnosis. The patient is now well. The paper concluded with an account of the literature of the subject, and a discussion as to the difficulty of diagnosis and the treatment of cases of hydronephrosis.

To a listener, it seemed that the reader intimated quite often enough the superiority of his diagnostic powers over those of other gentlemen whom he called in consultation, and that he spoke with quite as much authority as an experience of one case would allow.

Dr. Douglass Graham read a paper on Massage. He stated that the ancients sometimes employed it in the treatment of disease. He discussed particularly its advantages in subacute rheumatism and in recent sprains.

The third paper was by Dr. T. B. Curtis, of Boston, on Cotton-Wool Dressings. This method, as adopted by Guérin, of Paris, was detailed in a very interesting way by the reader, who had personal experience in its employment in Guérin's ward. It is one of the forms of the antiseptic method of dressing wounds, the theory being that the septic germs which the air contains are filtered out on their passage through the cotton, so that only pure air reaches the wound. This mode is of especial use in the dressing of stumps after amputations. The cotton needs to be applied in great abundance; Guérin's rule being, for those who were applying it for the first time, to put on *too much*. It is to be firmly bandaged to the wound, and not to be removed, if all goes well, for three weeks. After that time, the wound is to be dressed in the ordinary way. It is judged that the wound is doing well, first, if the condition of the patient, secondly, if the dressing, remain satisfactory. The first of these two points is in a great measure determined by careful observations with the thermometer, which will rise abnormally should unfavorable complications arise, while if little or no discharge appears from under the cotton the second point is satisfactorily established.

Dr. Curtis did not claim that pyæmia and septicæmia were entirely unknown in cases where this dressing had been employed, but that their frequency seemed to be much diminished since Guérin had adopted his method. The application gives great comfort to the patient, the reparative process being accompanied with scarcely any pain. The dressing in time becomes by no means odorless.

Dr. E. P. Hurd, of Newburyport, then discussed at length the Germ-Theory of Disease. He gave a *résumé* of the views of Hallier, Cohn, Pasteur, Salisbury, Beale, and others, but considered that they were all of them speculations, and none of them established facts. As to the origin of disease, or in what it consists, we must as yet confess our ignorance.

Chronic Cervical Endometritis formed the subject of a paper by Dr. S. D. Presbrey, of Taunton. We failed to discover anything new in the communication, unless

it was the suggestion that, by means of an instrument for insufflation, powders, as of tannin or persulphate of iron, could be applied to the interior of the uterus with facility.

Dr. F. W. Goss, of Roxbury, next called attention to the dressing of wounds. The various methods now in vogue in the dressing of wounds were considered, of which the occlusive treatment and the open treatment are the extremes. The reader believed that, in view of these conflicting methods, it was well to keep in mind the leading principles held by the best practitioners from time immemorial in the treatment of wounds. We heard it remarked that the article was a temperate one, and might be very useful.

The last paper of the afternoon was by Dr. J. Baxter Upham, of Boston, entitled "Reflections on the late Epidemic of Cerebro-Spinal Meningitis in Massachusetts." The statistics of the epidemic had evidently been collected with much care and labor, and their results were concisely stated. Dr. Upham remarked that it was surprising how varied had been the treatment, and yet how confident different practitioners had been in modes as distinct as possible. No conclusion could be gathered from the returns as to what therapeutic agents could be most advantageously employed in cerebro-spinal meningitis.

During the evening of Tuesday the Councillors elected the following officers for the ensuing year: *President*, Dr. B. E. Colting, of Roxbury; *Vice-President*, Dr. Joseph Sargent, of Worcester; *Treasurer*, Dr. Francis Minot, of Boston; *Corresponding Secretary*, Dr. C. W. Swan; *Recording Secretary*, Dr. F. W. Draper; *Librarian*, Dr. D. H. Hayden, all of Boston. Dr. G. H. Lyman, of Boston, was appointed Orator, and Dr. T. N. Stone, of Wellfleet, the Anniversary Chairman for the next annual meeting.

Wednesday the Society reassembled at 10 A.M., the President, Dr. George C. Shattuck, of Boston, in the chair.

It was announced that Professor Henry W. Acland, of Oxford, England, had been elected an honorary member.

Dr. Edward Cowles, the Superintendent of Boston City Hospital, read a paper on the Treatment of the Sick in Tents and Temporary Hospitals. The reader held that recent observation and experience had shown that more favorable results were obtained from the treatment of patients in temporary structures than when they were placed in regular hospitals. He contended that it was a mistake to spend vast sums of money to erect costly and magnificent buildings, when a much less amount could, with far greater advantage to the patients, build a hospital with a view to its removal in a few years. He showed a diagram, and gave an account of the structure of the tents in use at the institution with which he is connected.

In the discussion which followed, several members coincided with Dr. Cowles in the views he had advanced, and related their experience in the late rebellion in confirmation.

Dr. Henry Clarke, of Worcester, then read a paper on the Surgical Treatment of Empyema. He stated that the plan which was now recognized as the best mode of treatment in such cases—that of a free opening into the chest, to remain unclosed as long as pus continued to be secreted—was recommended by Hippocrates. The paper was a tiresome one, from the details of cases which it contained. What a want of good judgment it shows to attempt to read the daily record of cases in all its items! It may do for the printer, but is wearisome to any audience.

Transfusion was the subject treated of by Dr. J. R. Chadwick, of Boston. His paper was concise, interesting, and to the point. After stating the history of the procedure, its physiological and other relations, and the class of cases to which it was adapted, Dr. C. showed Aveling's apparatus for the performance of immediate transfusion, and explained its method of use.

At one o'clock, P.M., the Annual Address was delivered by Dr. Nathan Allen, of Lowell, on The Medical Problems of the Day. The part of greatest interest was in regard to the law of human increase. Dr. Allen holds it to be an established fact that our native population is relatively decreasing,—the births hardly equaling the deaths,—while the children of foreigners are rapidly supplying their places; so that if the present state of things continues the descendants of the old English stock will soon be in the minority.

The hour allotted for the discourse was evidently too short a time for the speaker to present in full all he had prepared: nevertheless, the selections were made with judgment, and were so connected as to give the audience a good understanding of the orator's views.

At two o'clock, the Fellows, to the number of nearly eight hundred, passed into the Music Hall to the Anniversary; and after the dinner, the Anniversary Chairman, Dr. R. L. Hodgdon, of Arlington, called the meeting to order and gave an address of welcome.

To the toast, "The Massachusetts Medical Society," the retiring President, Dr. George C. Shattuck, responded. He alluded to the changes that had taken place in the course of study at the Harvard Medical School, insuring a better education to its students than under the old system, and that its graduates would enter upon their professional work with a better preparation, therefore, than had been possible before. Reference was also made to the trial and expulsion of the homœopathic members, as a vindication by the Society of the principles and purposes for which it exists. As to the admission of female practitioners, they had themselves settled the question by putting their school into the hands of the homœopaths.

Toasts were given and speeches were made by the Chaplain of the day, Rev. Mr. King, of Roxbury, by Dr. Allen, by Dr. Colting, the President elect, by Dr. Parker, formerly of China, Dr. Green, of Boston, etc., etc. Dr. Stone, of Wellfleet, read an original and humorous poem.

Thus ended a very pleasant session of this venerable

Society,—one of the pleasantest and most profitable ever held, I am told. PENN.

PROCEEDINGS OF SOCIETIES.

PHILADELPHIA COUNTY MEDICAL SOCIETY.

A CONVERSATIONAL meeting was held March 11, 1874, at 8 o'clock P.M.

The PRESIDENT, DR. W. L. ATLEE, in the chair.

Dr. B. LEE had recently seen several cases which were of interest as presenting considerable obscurity in regard to diagnosis. The first which he would mention was that of a little girl about six years of age, residing in the upper part of the city, who was placed under his care by Prof. Stillé, with the information that the case had been treated by a female physician as one of disease of the right hip-joint. Not being satisfied with her management of the case, however, the parents had requested him to examine the child. Prof. S. had been unable to discover the signs of hip-disease, but thought that he had detected a spinal curvature in the lumbar region, and considered that this was probably the cause of her lameness. He had gone to the case with the preconceived notion that he simply had to differentiate between disease of the hip and Pott's disease. The history was as follows. The parents were both in good health, and had older children whose health was also good. This child had never been robust, nor had she ever had any very serious illness. Last summer, however, she had an attack of fever, intermittent and remittent, the mother was not certain which, lasting about ten days. Some time after this it was observed that she limped in walking, and became easily tired. She was taken to the sea-shore, but did not react well after surf-bathing, and appeared to walk worse rather than better. Her condition had not changed materially up to the time that he saw her, except that she was inclined to hold the knee bent, could endure less fatigue, and evinced more nervous excitability. The points which he made out on comparison of the two limbs were as follows. The right limb was half an inch shorter than the left. The flexors of the right knee were slightly contracted. The nates of the right side were smaller than those of the left, but did not present the characteristic flattening of hip-disease. It was impossible to determine whether upward force produced pain, as the child cried incessantly during the entire examination. The right limb could be abducted and rotated with ease, but the left presented considerable resistance to any effort to move it in these directions. The child had not been subject to "starting-pains" at night. The only pain complained of was behind the right thigh above the knee. Both in standing and walking, the foot was set flat upon the floor, and in a natural position. The signs of the early stage of coxalgia, therefore,—viz., apparent lengthening, fixation of the hip-joint with contraction of the adductors, eversion of the toes, elevation of the heel, and spasmodic contractions during sleep, with pain in the knee and along the front of the limb,—were every one absent as regarded the right limb. Certain of them were present in the left, but that had never been complained of. So far, results were negative. There was no hip-disease. Now for the spine. On placing the child in the erect standing posture, there certainly was a curve, having its convexity to the right, in the lumbar region, but it could be removed by direct pressure and by the muscular efforts of the patient. She could stoop forward, flexing the spine, to pick an object up from the floor.

She complained of no ventral pain, or of morning rigidity; her toes were not inverted; the curve presented no angularity whatever; and on placing her on her knees, or laying her on her face, it was obliterated. He was therefore compelled to decide against the existence of any organic affection of the spine. The curve was simply the result of the shortening of the right limb, and had no pathological significance. The child was by this time in such an excited condition that he considered it unwise to proceed further with the examination, and, confessing his inability to arrive at a definite conclusion, he proposed to continue the investigation another day. Three days later he saw the child again, and this time added the following facts to those which he had before determined. The temperature of the right limb was decidedly lower than that of the left. Its circumference in muscular regions was from half an inch to an inch less. The muscles were soft and flabby, and, although all the motions of the limb were accurately made, they were less vigorous than those of its fellow. The ligaments of the hip-joint were somewhat relaxed. In other words, the innervation of the limb, as regarded circulation, calorification, nutrition, and muscular force, was decidedly deficient. Coupling this fact with the history, he thought that he had found ground to stand upon. The attack of fever which she had experienced eight months before was simply symptomatic of an attack of inflammation of the meninges of the spinal cord, of moderate severity, possibly malarial in its origin, which would account for the suspicion of intermittent. This was followed by effusion, producing loss of power in the right limb, evidenced by the difficulty of locomotion, and gradually by atrophy and by contraction of the hamstring tendons; the other limb being either not affected at all, or, as is often the case in the atrophic paralysis of childhood, speedily recovering. Dr. Grier, who applied the galvanic tests at Dr. Lee's request, found in the response which the muscles of the two limbs gave, an entire confirmation of the diagnosis.

The lecturer of the evening having now arrived, Dr. Lee declined to occupy longer the time of the Society. Dr. L. J. Deal then read a paper on "The Relation of the County Society to the Physician, and the Physician to the County Society."

[Although this paper was most excellent and very well received, yet, owing to the matter not being of general scientific interest, we have been forced by the very crowded state of our columns to omit both it and the discussion to which it gave rise.—ED. P. M. T.]

Dr. KEYSER mentioned the case of a child seven months old, which was brought to him the previous day with evidences of an old iritis and occlusion of the pupils of both eyes, without ever having had any inflammation in either eye since its birth. The child is fat and healthy; was born in perfect condition, as certified to by both mother and nurse, who brought the child to his office. The left eye was small and undeveloped, the iris drawn strongly and closely to the outer edge under the sclero-corneal line, pupil completely obliterated. The right eye was full size, cornea clear, complete circular (synechia) adhesion of the iris to the anterior capsule, and pupil filled in with lymph so as to be entirely occluded.

The right nostril was almost closed by a diaphragm of tissue across it, through which a very small round opening could be seen. This hole was just large enough to allow a No. 1 Bowman's tube to pass through. The left nostril was natural and free. There was considerable discharge of mucus and blood at times from the left nostril. Rather doubting the history of no inflammation of the eyes after birth, Dr. K. wrote to the family physician, Dr. Stine, for information, who replied "that the child was born August 19 last,

full-grown and perfectly healthy; had no sore eyes nor any inflammation of the eyes; the infant continuing in good health up to the 25th of the following month, when he was called to visit it for a severe attack of catarrh in the nose,—nose and ears discharging freely, but had no inflammation in either eye." Under all these circumstances, then, there must have been inflammation before birth—an "iritis in utero."

Constitutional syphilis is suspected, but could not be learned from the parties. The case is very rare and interesting.

GLEANINGS FROM OUR EXCHANGES.

MERCURY AS A CHOLAGOGUE (*The Lancet*, May 2, 1874).—In a lecture on Functional Derangements of the Liver, Dr. Murchison expressed his belief that mercury and allied purgatives produce bilious stools by irritating the upper part of the bowel and sweeping on the bile before there is time for its reabsorption. He also added, however, that there are grounds for believing that, apart from its increasing the discharge of bile from the bowel, mercury exerts a beneficial action in many functional derangements of the liver, in whatever way this is to be explained. Patients of the greatest intelligence suffering from hepatic disorders constantly declare that they derive benefit from occasional or repeated doses of mercurials which no other medicine or treatment of any sort confers. It is not impossible that the good effects of mercury on the liver, and in some forms of inflammation, may be due to its property of promoting disintegration. Mercury appears to have the power of rendering effused fibrin less cohesive, and so more easily removed by absorption than it otherwise would be. Modern physicians of high standing, and little likely to be accused of credulity as to the beneficial action of drugs, have thought that mercury is useful in croup, by causing a degradation and disintegration of the plastic membrane. If this be so, it seems not improbable that mercury, which from experiments we know to reach the liver, may, under certain circumstances, act beneficially by promoting, or in some way influencing, the disintegration of albumen. The remarkable effect of mercury on constitutional syphilis probably admits of a similar explanation. In whatever way it is to be explained, he considers the clinical proofs of the efficacy of mercury in certain derangements of the liver as overwhelming, and remarks that he says so the more advisedly because he was taught to regard mercury as a remedy worse than useless, not only in hepatic diseases, but also in syphilis; his present convictions having been forced upon him by experience.

EPILEPSY AND MIGRAINE (*The Journal of Mental Science*, April, 1874).—It having been asserted that the paroxysms of some forms of sick-headache resemble epileptic attacks, and may even develop into true specimens of the latter, and bromide of potassium having been found to have a decided beneficial effect in such condition, Mr. Richard Green has employed Indian hemp in nine cases of epilepsy, arguing that if there were any real identity between the diseases it might be expected to do good, as it unquestionably does in paroxysms of migraine. In no case, however, was there any diminution in the number of seizures; and in seven out of the nine there was a slight increase.

PARALYSIS OF THE HAND AND FORE-ARM CAUSED BY ESMARCH'S BLOODLESS METHOD (*The Medical Record*, May 15, 1874).—Dr. Robert Weir reports the case of a young man in whom it was found necessary to remove some dead bone from the elbow-joint. Esmarch's bandage was applied, the rubber cord of the diameter

of one-quarter of an inch being, as usual, tightly drawn three times around the limb at the junction of the upper and the middle third of the arm. The compression was continued about three-quarters of an hour. After the inflammatory reaction of the wound had passed away, it was found that the patient was unable to flex or extend any of the fingers, or the hand on the fore-arm. He complained of numbness on the tips of all his fingers, of the palm, and anterior surface of the fore-arm. The lesion was mainly confined to the median nerve. This condition remained unchanged for some time, but he afterwards rapidly regained the use of the affected muscles under the application of the galvanic current.

WOUND OF THE BRAIN—RECOVERY (*The Richmond and Louisville Medical Journal*, May, 1874).—Dr. R. F. Baldwin reports the case of a lad sixteen years old who was accidentally wounded by the discharge of a Colt's pocket-pistol in the hands of a companion a few feet distant. Upon receipt of the shot the boy fell with violence, but did not lose consciousness. The ball, about the size of a buckshot, entered the right frontal bone an inch above the centre of the eyebrow, and, passing through the brain, lodged in the occipital bone near the centres of the occipital cross. A silver probe passed by its own weight to the centre of the brain without touching the ball. As a precautionary measure he was bled, and Epsom salts were administered. The wound healed rapidly without any constitutional disturbance, and in ten days he returned to his home. He is still living in good health, and has never suffered the slightest inconvenience from the accident.

PHOSPHORUS IN MELANCHOLIA (*The Journal of Mental Science*, April, 1874).—Dr. S. W. D. Williams reports six cases of melancholia treated with phosphorus, three of which resulted in recovery, two in partial benefit, and one in entire failure. In the latter case a cure was rapidly effected, after the withdrawal of the phosphorus, by means of opium. In each case the dose was one pill of one-thirtieth of a grain twice daily, increasing to three or four pills daily. No toxic effects were observed, except a slight warmth in the epigastrium.

ATROPIA-POISONING.—Dr. T. H. Newland reports (*St. Louis Surgical and Medical Journal* for June) a case of atropia-poisoning in an adult. One and a quarter grains ingested; vomiting about an hour after ingestion; one-fourth of a grain of morphia every twenty, and two grains of carbonate of ammonium every ten minutes for two hours; recovery.

MISCELLANY.

SOME years ago we read an article upon an animal called the "devil," a native, we believe, of Van Diemen's Land, in which the writer, after giving instances of the creature's extraordinary ferocity, ended, "Of all animals, the very devil of devils is the devil itself." English colonies would seem also to own a monopoly of the same type as seen in quacks. Recently, in British Guiana, according to the *British Medical Journal*, a midwife named Amsterdam was called to see an unfortunate woman then in labor. Without giving much space to the details of the treatment instituted by this daughter of Belial, we quote the following specimen:

"The 'stretching' with the rope, which we have already spoken of, is described by a witness: Three women tied the deceased's wrists with tarred rope, twisting her up to the beam of the room with her legs

dangling. . . . One beat her with a strap with a buckle to the end. They repeated this every now and then, the deceased begging them to let her down, as she was so weak. She was lying from Friday to Monday on the bare boards. There ought to have been no difficulty in the birth, but the woman died undelivered, after nearly three days of agony."

THE NECROMETER.—It is stated that M. Bouchut has obtained the prize offered by the French Academy for an easy method of distinguishing simulated from real death. His "necrometer" appears to be simply a peculiar thermometer so adapted as to fit the axilla and to mark zero when death has occurred.

NOTES AND QUERIES.

As we admitted to our columns a letter sharply commenting upon the brain-experiment of Prof. Bartholow, it is but fair that we give place to the following letter, originally published in the *British Medical Journal*:

"SIR,—A case of epithelioma exposing the brain, on which I ventured to make some experiments, has excited unfavorable comment in your widely circulated journal and elsewhere. Under these circumstances, I beg to offer some explanations, which, whilst they do not justify the experiments in question, at least, it appears to me, put the matter in a less offensive shape.

"1. The patient was hopelessly diseased with a rodent ulcer, which had already invaded the dura mater. The ulcer was rapidly extending, and threatened an early extinction of life.

"2. The patient consented to have the experiments made.

"3. It was believed that fine insulated needles could be introduced without injury that would affect the progress and termination of the case, for the following reasons: The brain has been incised to permit the escape of pus, a notable and successful example of which has recently occurred in London. Portions of the brain-substance have been lost, and yet the patient survived; for example, the Massachusetts case, in which a tamping-iron was driven through the brain, the patient recovering, and dying many years afterwards of another malady.

"4. The faradic current was used; and this has, as is well known, no electrolytic action.

"5. The fatal result was attributable to the progress of the epithelioma. The erosion of the skull already had existed thirteen months. The thrombus found *post mortem* in the longitudinal sinus could not have been caused by the needles, which were introduced some distance from it on each side.

"Notwithstanding my sanguine expectations, based on the facts above stated, that small insulated needle electrodes could be introduced without injury into the cerebral substance, I now know that I was mistaken. To repeat such experiments with the knowledge we now have that injury will be done by them—although they did not cause the fatal result in my own case—would be in the highest degree criminal. I can only now express my regret that facts which I hoped would further, in some slight degree, the progress of knowledge, were obtained at the expense of some injury to the patient.

"I am, etc.,
"ROBERTS BARTHOLOW."

OFFICIAL LIST

OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U.S. ARMY, FROM JUNE 9 TO JUNE 15, 1874, INCLUSIVE.

HASSON, A. B., SURGEON.—Granted leave of absence for fourteen days, to commence on 13th inst. S. O. 113, Military Division of the Atlantic, June 9, 1874.

WRIGHT, J. P., SURGEON.—Granted leave of absence for thirty days. S. O. 129, A. G. O., June 11, 1874.

LAUDERDALE, J. V., ASSISTANT-SURGEON.—Assigned to temporary duty at Fort Adams, R. I. S. O. 116, Military Division of the Atlantic, June 12, 1874.

GHISELIN, JAMES T., SURGEON.—Resigned June 6, 1874.

SATURDAY, JUNE 27, 1874.

ORIGINAL COMMUNICATIONS.

ON TINNITUS AURIUM.

BY LAURENCE TURNBULL, M.D.,

Aural Surgeon, Howard Hospital, Philadelphia.

THE ringing noises heard in the ears are not only a symptom of the diseased condition of the organ, but also a very troublesome form of disease in itself, for after all apparent disorder has passed, the patient is still distressed and disturbed by a most persistent form of tinnitus.

Each individual, although suffering from the same symptom, generally describes it according as it is suggested by his or her habits or occupation. The old lady, fond of her cup of tea, compares the noises to the singing of the boiling kettle; while the servant in the kitchen has a constant ringing of bells in her ears. The engineer will tell you that the noise is like a faint locomotive-whistle; the miller compares it to the whirr of the wheel; while the boiler-maker has a succession of knockings in his ears; the gardener or farmer talks of it as a rustling of leaves, or waving of ripe grain; the sailor, or dweller near the sea, identifies it with the roar of the ocean.

Then we have the agreeable forms, as in an old deaf lady, who informed the writer that she was often serenaded by lovely voices, and would inquire of her children if they did not hear the same sweet sounds. Another pleasant form noticed by a recent writer* was in the case of a middle-aged woman, who spoke of the noise as a low singing of birds.

There are some forms which in time, if neglected, become almost a mental malady if the brain is diseased, or if there is a hereditary tendency in the family, but we have never known of a case of suicide from this cause, and our opinion is confirmed by Dr. Kirkbride, who for so many years has been the physician-in-chief of the Pennsylvania Hospital for the Insane in Philadelphia, expressed in a letter to the writer: "I do not now recall a case of insanity really owing to aural disease, although I think that defective hearing often aggravates some of the delusions of the insane, and disorder of the hearing-apparatus is not infrequent in insanity."

Dr. J. H. Worthington, physician-in-chief of the Friends' Asylum for the Insane (Twenty-third Ward, Philadelphia), thus writes: "I never knew a case of mental disorder which owed its existence to such disease (aural), nor any case of suicide in consequence of tinnitus aurium."

A similar opinion is expressed by Dr. John Curwen, chief physician of the Pennsylvania State Lunatic Hospital, Harrisburg, who had also a long experience as first assistant-physician of the Pennsylvania Hospital for the Insane, at Philadelphia. He writes, "I do not recollect any cases of insanity

under my care which were produced by ear-noises: all the cases of hallucination of hearing have arisen from diseases of the brain, induced in various ways. The three most decided cases now in my care are caused by intemperance and overwork, both mental and bodily, bringing on great cerebral disorder."

Von Trölsch,† in his work on the ear, says in regard to the tinnitus aurium of the insane, "It is a very important question whether the aural hallucinations occurring in insane patients do not frequently depend on peripheric tinnitus, which is exaggerated by the patients." It would be well worth the trouble of physicians for the insane to examine the ears of such patients. He further states, "I am indebted to my esteemed friend Prof. L. Meyer, formerly director of the Insane Asylum of Hamburg, for the history of a melancholic patient who was relieved of a sound in the ear (seeming to the patient to be the cry of a child) by the removal of a plug of inspissated cerumen, which caused deafness of one side. The patient, from that time forward, made a rapid and complete recovery."

Schwartz, an aural surgeon, and Köppe, a physician for the insane, have made this question a subject of investigation.

Schwartz says, "Subjective aural sensations, which are caused by demonstrable affections of the ear, may, in predisposed persons, especially when there is hereditary tendency to mental disease, become the direct cause of aural hallucinations, that may accelerate the outbreak of mental disease."‡ He states that he treated such a patient for a long time, and she was protected from a threatened attack by the local treatment of the aural disease.

Dr. Köppe, before referred to, assistant-physician to the Provincial Insane Asylum at Halle, examined this patient with Dr. Schwartz, and was convinced that the treatment caused the above-mentioned results. In other cases, insane persons who suffer from aural disease distinguish its tinnitus from their illusions or hallucinations. They hear their "sounds" simultaneously, but independently, of the tinnitus aurium.

Dr. Köppe examined thirty-one insane persons in whom considerable disease of the auditory apparatus could be detected. In none of them was there tinnitus without at the same time the existence of aural illusions and hallucinations.

Seven insane persons also had chronic hyperæmia of the vessels of the handle of the malleus, and, besides the subjective aural sensations, aural illusions and hallucinations. In two cases of inspissated cerumen, the tinnitus disappeared after the removal of the plugs of wax, but the *hallucinations remained*. In several cases, which are fully detailed, both the tinnitus and the hallucinations disappeared after local treatment of the ear. Two cases were particularly interesting, where only one ear was affected, and where the sounds were only heard on that side.‡

† Fifth German edition, p. 575.

‡ Berliner Klinische Wochenschrift, 1866, Nos. 12, 13.—"Gehörstörungen und Psychosen." Allgem. Zeitschr. für Psychiatrie, 1867, Bd. xxiv. Auszugsweise im Archiv für Ohrenheilkunde, B. iii. S. 332.

* Dr. Dalby, of London.

Trölsch* again states, "Perhaps we may designate the one variety as nervous tinnitus aurium, the other as material or acoustic, and which may exist at the same time."

William Harvey, F.R.C.S.,† mentions hysterical, hypochondriacal, and nervous patients, as suffering from every possible form of tinnitus. Wilde‡ says, "In some forms of hysteria, and in cases of mental aberration and lunacy, as those familiar with such know full well, the patients often complain of all manner of noises, whisperings, and unnatural sounds, but these are, I believe, generally the result of a disordered imagination, like the ocular spectra which afflict certain individuals."

Saissy,§ in treating of symptomatic tinnitus, says it depends on "nervous diseases, such as hysteria, hypochondriasis, convulsions, and mental alienations."

Dr. O. D. Pomeroy,|| of New York, made an examination of sixty lunatics at the Blackwell's Island Lunatic Asylum, New York, thirty of whom had hallucinations of hearing, and thirty had none, with the view of determining whether diseases of the ear had any agency in the production of the symptoms, and his conclusions were as follows: "The result of the examination is a little in favor of the hallucination cases being oftener associated with ear-disease. The proportion is not, however, anything like that previously quoted from Von Trölsch and others." "Neither was it possible to observe any connection between the tinnitus aurium and the hallucinations." Certainly, the aural disease did not, in a single instance, develop or excite the insanity, as has been quoted. This confirms our own examinations and correspondence, and gives a more hopeful and proper view of even the worst form of this affection. Our rule should be that if there is any hereditary tendency to mental disease, and there are persistent hallucinations resembling any of the forms we have given as examples, care should be taken that the ears be examined, and, if it be possible, this symptom removed. We cannot pass from this part of our subject without a short reference to the observations made by Nussbaumer, in which he attacks the physiological axiom that each organ of sense is capable of peculiar perceptions, which can be excited by no one of the other organs of sense. "The author himself, and his older brother, both have this peculiarity, that every perception of sound, either musical or otherwise, excites also a perception of light. His ear is so delicate that with the deep notes of a piano he is able to hear eleven over-tones, and with each one of these has a distinct perception of light. As children, he and his brother were in the habit of designating frequently the tones of different objects when struck, not by the sound, but by the color produced."

"To learn whether the perceptions of the two brothers were always the same, a long series of questions, to be answered by each, was written,

from which it seemed that, although each had a perception of light with each sound tried, yet the color of the light varied: being, for instance, for the note A, in one, dark Prussian blue, and, in the other, dark yellow.

"The color was never seen externally, but, as he expressed it, his brain suffered from the action of a sound-wave in the meatus, not only the normal but also such a change as produced in his consciousness an impression of color. When in concentrated thought, however, the perception of color might escape notice.

"In the discussion which followed, Prof. Benedict considered that the phenomena were not physiological, but pathological. Optical perceptions, as the direct result of acoustical perceptions, could only be pathological. Similar obscure diseases of the mind and brain were frequently observed in hysterical, hypochondriacal, and melancholy persons, but were not understood, as most physicians were unskilled in psychology. He predicted that similar observations to those of Nussbaumer would soon be reported, now that attention had been called to them. Finally, Prof. Benedict warned the patient against further observations on himself, lest the phenomena would overpower him, especially as it was evident that there was a hereditary tendency; possibly, heterotopia was the cause of the phenomenon."¶

THE DIAGNOSIS AND CAUSES OF TINNITUS AURIUM.

The first and most frequent cause we shall notice is the pressing of a portion of altered cerumen upon the membrana tympani. This usually arises from cold, heat, or moisture, or the three combined, detaching it from the side of the auditory canal and causing it to press on the membrane. The second cause is an elongation of the hairs in the external orifice of the auditory canal, passing across and interlacing with cerumen or epithelium scales, and producing a sound like an Æolian harp. In another form, a single hair was found to rest upon the surface of the membrana tympani. A particle of pus on the same membrane gave not only a sound, but a disagreeable one, until removed.

A third cause is a small quantity of adhesive mucus on the inner surface of the membrana tympani, or middle ear, pharyngeal orifice of the Eustachian tube, or on the mucous membrane near the tube. These conditions are almost always attendant in acute, subacute, or chronic catarrh.

A fourth cause is a foreign body in the Eustachian tube, as, for instance, a beard of barley,** or a bullet.†† In the first case, the beard caused otitis media purulenta, with most distressing noises, and was ultimately discharged through a perforation of the membrana tympani without the loss of the hearing, and with entire relief to the tinnitus. The bullet could not be removed. In a case related by Fleischmann, the result was not so satisfactory.

* Allg.-Zeitschr. f. Psych., iii. 332.

† The Ear in Health and Disease, London, 1865, p. 25.

‡ Diseases of the Ear, Philadelphia, 1853, p. 361.

§ An Essay on the Diseases of the Internal Ear. J. A. Saissy, Baltimore, 1829, p. 132.

|| Transactions Am. Otol. Society, Boston, 1871, p. 44.

¶ Report on Otology, by J. Orne Green, M.D., from Nussbaumer. Reprinted from the Boston Med. and Surg. Journal, October, 1873, p. 9. Ueber subjective Farbenempfindungen die durch objective Gehörsempfindungen erzeugt werden. Wiener Med. Wochenschrift, Nos. 1, 2, 3, 1873.

** Turnbull on Diseases of the Ear, p. 78.

†† Ibid., p. 94.

A man complained for years of a continuous sounding in his ears and of a very peculiar sensation in his pharynx. He died, and on a post-mortem section a beard of barley was found projecting from the pharyngeal orifice of the tube, and reaching into its osseous portion.*

A fifth cause of tinnitus occurs synchronously with the action of the heart, and may be *anæmia* or a diseased condition of the blood, or enlargement or narrowing of some of the numerous arteries or their branches in the vicinity of the ear. This narrowing occurs generally in a branch of the temporal, posterior auricular, or carotid arteries, and we can determine by pressure whether it depends upon them, after finding no physical cause in the ear itself.

A sixth class comprises a large number of doubtful cases, under the head of *nervous tinnitus*, in which it is conjectured that there is inflammation, irritation, extravasation, or disturbed circulation of blood in the labyrinth, cochlea, semicircular canal, auditory nerve, or reflected lesions of the brain.

The diagnosis in this class of cases is made by excluding all causes which would be at all possible to produce the sound in the external or middle ear.

The seventh cause is immoderate contraction of the tensor tympani muscle, which contraction not only moves the malleus and with it the membrana tympani, but also, if the contraction is excessive, the whole chain of ossicles is drawn inwards, and, as a consequence, the plate of the stirrup is pressed deeply into the oval window (fenestra ovalis), causing violent subjective noises from the intra-labyrinthal pressure. "Dr. Gruber† observes that the tensor tympani muscle arises from the cartilaginous portion of the Eustachian tube, but is connected with the tensor veli palati muscle by a tendinous prolongation in such a way that the intimate connection between the two is completed; and L. Mayer even asserts that he considers the two muscles as a single digastric muscle. It is well known how often this muscle suffers in the frequent diseases of the naso-pharyngeal structures. If we notice the soft palate and usually hypertrophied tonsils into which this muscle enters, we will see how the same is displaced and drawn out of its position, and it will be clear that this muscle in such cases is unable to properly perform its function—viz., the opening of the Eustachian tube; and this abnormality, sooner or later, will be sure to affect its companion muscle—the tensor tympani—and so cause the spasmodic contraction of the latter, which will exert a further influence upon the labyrinth."

Now the question arises, Are there any positive symptoms by which we can with certainty diagnose in the living such a retraction of the tensor tympani muscle? We must answer most decidedly in the affirmative.

I will not speak of the anamnesia, and of the subjective symptoms, which certainly deserve some consideration, but pass at once to those positive signs especially apparent in such cases. In conse-

quence of the peculiar connection between the malleus and the membrana tympani, that is, the lower end of the malleus with the adjacent portion of the membrana, it is directed inwards, while at the upper end the short process pushes it outwards; and there originate two folds, the posterior of which is much more distinct, running backward, while the anterior fold runs forward, and in the comparison of this bulging with the sunken condition of the membrane we have an important indication, which Dr. Gruber was the first to describe and employ in diagnosis.

When the membrana tympani is drawn forcibly inwards, the lower end of the malleus is drawn with it, while the upper end remains nearer its normal position, so causing the posterior fold of the membrana tympani to become more prominent, and we have at once an abnormal inward bulging of the membrana tympani. Of course, such a condition of the membrana tympani can be produced by causes other than a contraction of the tensor tympani, but we possess very positive means of investigation for distinguishing other abnormalities which show the same pathognomonic appearances on the part of the membrana, and by exclusion we can make our diagnosis sure.

Since I have here considered the greater prominence of the folds of the membrane as a diagnostic symptom of the sunken condition, and as a phenomenon related to shortening of the tendon of the tensor tympani, I might also describe many others which are all caused by shortening of the tendon.

We know how to recognize and appreciate them, and, by a minute examination and some diagnostic acuteness, should seldom remain in doubt.

In this connection, I might mention a few of the symptoms which are here of great diagnostic value, but which, as it seems to me, have not been sufficiently appreciated by my colleagues.

These appearances are as follows: The handle of the malleus appears broader, the membrana tympani is twisted (*torquirt sein*), the axis-band of the malleus becomes more conspicuous, and the membrana tympani returns more or less rapidly, by retraction, into its former abnormal position, after the application of the air-douche had caused it to bulge outward."

The eighth cause is "Aspergillus in the auditory canal or on the membrana tympani;" this is a mould or fungus which causes inflammation with a discharge like otorrhœa, or a whitish membrane like cerumen or cholesterolin. In every obstinate case of inflammation of the auditory canal, we should carefully examine the discharged material under the microscope to be certain of the diagnosis. The symptoms are fulness of the ear, constant tinnitus aurium, and pain of a dull heavy character.‡

PATHOLOGY.

We have noticed, under causes, that "tinnitus aurium" results from affections of the external ear, on both the anterior and posterior surface of the

* Turnbull on Diseases of the Ear, p. 79.

† Tenotomy of the Tensor Tympani, by Prof. Joseph Gruber, M.D. Translated by Charles S. Turnbull, M.D., Phila., 1873, p. 23.

‡ See paper by the writer on "Aspergillus," in Transactions Med. Soc. of the State of Pennsylvania, 1873. Diseases of the Ear, pp. 104-

membrana tympani, cavity of the tympanum or middle ear, and Eustachian tube. The noises in the internal ear have also been confounded with an affection of the brain itself or its coverings. It is possible to have ringing noises in the ear even when there is, so far as our examinations can penetrate, no organic change in any portion of the ear.

In the post-mortem examination of persons who have suffered from "tinnitus" for a long period without any disease of the ear before referred to, the appearances that have been found on dissection of the petrous bone by Ménière,* Politzer,† Schwartz,‡ and Hinton,§ are disease of the semicircular canals, ecchymosis in the vestibule, hyperæmia of the cochlea, general enlargement and fulness of the vessels of the labyrinth.

We must therefore for the present come to the conclusion that the semicircular canals and vestibule are the seat of the diseased conditions above described, with now and then apoplexy or endolabyrinthine fulness of the labyrinth, showing more or less pressure within its walls or irritation of the auditory nerve. In proof of this, cases are on record where the patient suffered for years with constant noises, and yet when the ears were examined by careful dissection of the temporal bones, etc., nothing abnormal was found.

TREATMENT.

In the first class of cases to which we referred—namely, pressure from cerumen upon the membrana tympani—the treatment in the great majority of cases is simply to remove the offending cause by means of the injection of tepid water in which there is a portion of soda. Numerous cases of this class are relieved by this simple procedure; many of them are of a distressing character.

The second variety is caused by excessive growth of stiff hairs in the meatus. The treatment consists in carefully cutting the hairs close up to their point of exit by means of curved scissors, and removing each one when cut. The objection to plucking them out is that it will frequently cause an abscess at the termination of the hair-follicle. Another form of this same variety is when a hair becomes detached and falls upon the membrana tympani, from which it must be removed by means of a camel's-hair pencil slightly moistened in glycerin.

The patient referred to in whom pus from an abscess was washed to the surface of the membrana tympani was a distinguished hospital-surgeon, who caused it by attempting to wash out his own ear. When the syringe was properly employed in the hands of another, the pus was removed, and the tinnitus ceased.

The third variety of causes is when adhesive mucus is on the posterior surface of the membrana tympani, middle ear, or mastoid cells. This is removed by a few blasts from Politzer's air-bag or douche; if these means are not effectual, paracentesis of the membrana tympani and washing out the middle ear

with a solution of biborate or sulphocarbonate of sodium in warm water. At the same time attention must be given to the naso-pharyngeal region with the use of the nasal douche, sprays, and gargles.

In the fourth variety, or foreign bodies in the Eustachian tube, the treatment will be to reverse the action of the air-bag by withdrawing the air by means of an elastic catheter in the pharyngeal orifice of the tube, and compressing the nostrils, or by means of bag and curved glass tube introduced by the mouth as near as possible to the mouth of the tube, and rarefying the air. Should the foreign body produce inflammation, with effusion bulging of the membrane, its escape should be facilitated by perforation of the membrane by an aspirator-needle.

In the fifth form, or pulsating tinnitus, the result of some alteration in the blood-vessels, anæmia, or excessive action of the heart, we must try compression of the temporal or carotid, diminishing the frequency of the heart's action by aconite or digitalis; or, if the patient is anæmic, administer the salts of manganese, or the lactate or citrate of iron, with good nourishing diet and out-door exercise, avoiding all forms of excitement, as dancing, violent exercise, or mental effort.

In the sixth class we must make a careful diagnosis by exclusion to discover whether we have excitement of the brain causing subjective noises, or on the other hand the exhaustion from over-effort of the brain or some drain upon the nervous system; for in the first instance we resort to large doses of bromide of potassium, or, if there is any suspicion of syphilitic complication, add the iodide of potassium until we produce bromidism on the one hand or iodidism on the other, with its characteristic eruption.

If it is the second instance from exhaustion, we resort to a solution of phosphoric acid employed in the form of a lemonade, or to the phosphites or hypo-phosphites, in conjunction with strychnia or its salts, with the use of the galvanic current to complete the cure.

In the seventh class of cases the operation of tenotomy of the tensor tympani is to be recommended, and the mode of operation is that of Dr. Fr. E. Weber-Liel,|| of Berlin, which we have here employed in a number of cases with more or less success, depending upon the cause.

In the eighth class of cases, which are generally the result of a patulous condition of the orifice of the Eustachian tube, the remedy should be the application of a powerful solution of nitrate of silver or sulphate of copper or carbolic acid to the mouth of the tube, and washing by the use of the double Eustachian catheter, with the internal use of strychnia, to stimulate the muscle to contract and close the orifice.

The ninth class, or "Aspergillus;" the vegetable parasite or fungi is to be removed by the forceps and a warm saturated solution of sulphite of soda, and the discharge of mucus or serous fluid is to be

* Gazette Méd. de Paris, 1861, p. 29.

† Archiv des Ohrenheilkunde, vol. ii. p. 88.

‡ Ibid., Bd. i. p. 206.

§ Diseases and Injuries of the Ear, by Dalby, p. 182.

|| Tenotomy of the Tensor Tympani, by Fr. E. Weber-Liel, Lecturer on Otology, University of Berlin. Translated by Laurence Turnbull, M.D. Pamphlet, pp. 14. J. Moore, Phila., 1873.

checked by the use of an injection of a strong solution of sulphocarbonate of zinc. A number of these cases of a mild character we have treated after the summer season in patients who have allowed the sea-water to dampen the hair and pass into the ears. In these cases a mild solution of an astringent, acetate of lead or sulphate of zinc, will remove all the symptoms of itching, deafness, and distressing tinnitus, in a very short time.

EMBOLI OF THE RIGHT MIDDLE CEREBRAL ARTERY; LEFT HEMIPLEGIA, AND DEATH,

PRECEDED FOR THREE MONTHS BY MUSCULAR AND OTHER PAINS PROBABLY DUE TO EMBOLI OF THE REGIONS THUS AFFECTED.

BY S. WEIR MITCHELL, M.D.

MISS B., æt. 32, at the age of 16 years had an attack of inflammatory rheumatism, resulting in disease of the heart. She came under my care at the age of 23, and thereafter suffered at intervals from violent palpitation of the heart. At this time she was gaining in flesh, and was of a ruddy complexion. The heart was violent in action, and beat with a strong, decisive throb, and with the firm blow of an enlarged organ. The apex-beat was felt over a large area, and most distinctly an inch and a half below and an inch to the left of the nipple. At this point there was a strong, clear murmur, which never changed character, and which entirely replaced the systolic sound. There was, therefore, no doubt as to there being regurgitant disease of the mitral valve, with no other valvular lesion. As years went on, the frequent flushes and consequent vertigo became more and more annoying, and the signs of enlargement more decided. Many forms of medication were tried and in turn failed, when at last permanent comfort resulted from the use of a course of milk-cure, under which the flushes lessened, the heart became tranquil, and she lost some fifteen pounds of weight in six weeks. Thenceforward, until a year ago, she remained in fair health. At this time, in May, 1873, she began to lose weight, and to suffer in strength and appetite. Despite tonics and change of air, and with no appreciable new disease of heart, lung, or kidneys, she continued to lose ground, the murmur at the left apex growing more and more noisy. About three months ago Miss B. was suddenly seized with acute pain in the left calf. It yielded to local treatment, but was followed for two months, at intervals of from a few hours to days, by a strange succession of like pains, sometimes in the muscular masses of the legs below the knee, once or twice in the feet, then in the neck, the arms, and the hands, so that she was rarely long free of pain. With these sudden attacks there was rarely any fever. They came suddenly, grew worse for hours or for a day, were accompanied with most variable amounts of local tenderness, and sometimes with slight swelling, and then by degrees faded, to re-appear elsewhere. At length she had two large blotches of extravasated blood, like subcutaneous bruise-marks, on the left hand, with intense aching pain. The week after, the right calf showed a like appearance, and once the left cheek and right hand. It was, of course, natural to regard a person once the victim of rheumatism as likely again to suffer from it, but the absence of high fever, and a temperature never above 100° F., there being at no time any joint-disease, puzzled me extremely. On the 8th of April she had quite suddenly, while in bed, a sense of vertigo, and soon after noticed loss of vision

in the lower half of the left visual field. A careful ophthalmoscopic study showed only slight haziness along the arteries and veins of both disks, but no swelling of either. I left her feeling myself most uneasy in view of the strong probability of embolism. Next morning she was in a stupor, and had absolute hemiplegia of the left side, including the face, and also some nystagmus, the eyes twitching, and not passing to the right of the middle line. The reflex acts were marked, and sensation seemed, and proved afterwards, to be unaltered. After a few days, consciousness returned, and she became clear in mind, but with no tendency to speak unless addressed. A week later she began to talk more, and thenceforward grew unusually irritable, but had only once some pain in the left leg. Three weeks after her attack, the stupor, returning, slowly deepened, until, four weeks from her first palsy, she died quietly.

I should add that twice last fall she fell suddenly in the street, her limbs simply giving way, with no accompanying brain-symptoms. I should also add that twice during her long illness the pains came on afresh after unusual exertion. There was at no time any albuminuria.

At the post-mortem section, which was necessarily limited, we found one lip of the mitral valve very rough, and covered with long beaded vegetations or studded with tiny morsels of scarcely adherent fibrin. Nearly all were small as shot, and seemed ready to drop off at a touch. The heart was of normal size, and not fatty; the other valves healthy. The left side of the brain was sound, except for a small clot at the posterior aspect of the posterior lobe, beneath the membranes. The right middle lobe was softened, and thoroughly diffused as far out as the gray matter, and the softening extended deep into the corpus striatum. Dr. Gerhard, who kindly made the examination, found the right middle cerebral artery plugged by a series of minute shot-like emboli, which accurately corresponded to those on the mitral valve. The lowest was just outside of the circle of Willis.

The brain-symptoms in this case were sufficiently accounted for by the state of the cardiac valves, and when I saw the heart it occurred to me that the pains in the muscles and areolar spaces—pains which, to Dr. John Meigs, who also saw the case, and to myself, were strange and clinically inexplicable—must have been due to the impaction in the tissues of little emboli. Where they filled up vessels near the surface, the usual extravasation was seen beyond the point obstructed. Where deep in the tissues the vascular results were hidden, but in both cases alike pain resulted,—a pain which was perhaps the more severely felt, owing to the temperament of the sufferer. As the case now appears to me, I have little doubt that this was the correct reading of it.

I may add, as matter of interest, that for three weeks after her paralysis the nails grew on neither hand, and that for the last week they were so nearly alike on both as to make me unable to decide which grew the faster. It is curious that the cases of exception to the non-growth for a time of the nails on the palsied side have most frequently been left hemiplegias.

I supposed that I should find, in the literature of emboli, many cases like the one I have stated; but while embolic and thrombic plugging of large vessels seem common enough, instances of multiple emboli in minute arteries seem rare.

Our poverty in cases of this kind is certainly

curious. When once attention shall have been fully directed to them, they will possibly prove less rare than they seem to be. When a person has had rheumatism, any long sequence of pains and tenderness with pain is very apt to be taken for some form of the old enemy, and we may thus be led, as I was in my own case, to overlook the true parentage.

NOTES OF HOSPITAL PRACTICE.

PENNSYLVANIA HOSPITAL.*

A VISIT to the upper surgical wards, at present under the care of Dr. Hewson, shows but few cases of importance under treatment. An operation was recently performed for the relief of cancer involving the glands of the inguinal region. The disease was in the ulcerative stage, and involved the glands and tissues over an area of about six square inches. The operation consisted in a careful dissection by means of a scalpel, aided by the fingers of the operator, and extending down to the sheath of the femoral vessels.

A few incisions were made to relieve tension, and the two or three superficial vessels which had been severed were secured by torsion, no ligature being used. The wound was closed by sutures, and the thigh was strongly flexed upon the abdomen.

It was hoped that rapid union would have taken place, but, as the flaps showed a tendency to slough, the sutures were removed after a day or two, and when we saw the case, a week subsequent to the operation, union by granulation was proceeding nicely.

The dressing used in this case was oakum soaked in a solution of carbolic acid (3i ad Oj aq.), over which finely-powdered dry clay was sprinkled, and as a covering to the whole a paste of the latter.

Suppuration from so large a surface being somewhat profuse, a means of exit for the fluid product was afforded by the use of an india-rubber drainage-tube. In order to keep the wounded parts in apposition, the thigh remained flexed upon the abdomen, and was supported in this position by an ingenious application of the anterior wire splint, suspended by a "gallows." This arrangement permits such movements of the patient as are necessary for defecation, etc., to be made without disturbing the dressing.

A very successful case of skin-grafting was performed by Dr. H. on an ulcer of the leg, which had long defied all other methods of treatment. The "grafts" were in reality only scrapings from the deeper layer of epithelium on the patient's instep, which flourished amazingly when transplanted.

In the lower surgical wards, under Dr. Hunt's care, there have been lately a number of cases of erysipelas, several quite severe, but none fatal: the treatment is similar to that employed in the medical ward. As a dressing for ordinary fractures of the lower limbs, Dr. Hunt prefers the fracture-box, the limb being placed on a small pillow, which is enclosed in the box. Where the fracture is compound, the same box is used, but is filled with bran, that portion nearest the wound being mixed with carbolic acid powder. This dressing is neat, and by its use not only are the discharges absorbed and disinfected as they escape, but the wound may be inspected and cleansed at any moment without disturbing the limb in the least.

Fractures in the continuity of the femur are treated

by Dr. Hunt with the aid of long sand-bags placed on either side of the limb, extension being provided for by strips of plaster attached to either side of the leg, and meeting like a stirrup below the sole of the foot, to which a small cord is fastened, passing over a pulley, and having an appropriate weight at the end. In one of the wards we observed an unusual form of fracture in a child of seven years, involving the neck of the humerus, the head of which had sustained a luxation forwards; a rectangular splint had been applied after reduction of the luxation.

In the medical ward there are now under Dr. J. A. Meigs's care a number of cases of acute rheumatism; heart-complications have been unusual lately, and only one or two patients are at present suffering from such troubles. The usual treatment is the bromide of ammonium in ten- to fifteen-grain doses three or more times daily. This is frequently combined with the acetate of potassium. When violent action of the heart co-exists, or when valvular lesions are threatened, tincture of digitalis in ten-drop doses *ter die* is employed, and in the latter case sinapisms or belladonna plasters are applied over the præcordia.

Several cases of erysipelas are under treatment; one of these is remarkable for having undergone a number of relapses. The treatment in these cases is invariably the tinct. ferri chlor. in doses of twenty drops frequently repeated, often every two hours. Slippery elm mucilage is used as an outward application, and during convalescence quinia is freely administered. There are at present in the ward a number of individual cases of interest. Among these is one of congestion of the spinal cord in a young woman, who, having been exposed to cold and dampness during her menstrual period, was suddenly seized with loss of power in the muscles of the back, so that she was unable to hold herself in an erect position. Later, she began to experience stiffness in the neck, and some six months after the exposure she began to lose power in her limbs. When admitted to the hospital she could walk with great difficulty. Dry cups were applied to the spine, and a pill of ext. belladonnæ, gr. $\frac{1}{2}$, quiniæ sulph., gr. ii, *ter die*, under the influence of which she is slowly improving.

In the men's ward there is a case of dilation of the stomach, accompanied by occasional paroxysms of severe epigastric pain. Any food taken causes "heaviness," and nausea without vomiting is frequent. Examination at the time of the patient's admission showed sarcinæ and torulæ in the contents of the stomach. The case is a chronic one, and has been in and out of the hospital several times. Various remedies, as strychnia, argenti nitras, etc., have been used without permanent success. At present the patient is taking pepsin, gr. v, with acid. nitromuriat. dil., gtt. x, t. d. in water, under the use of which he seems to be slowly improving.

A case of syphilitic hemiplegia has been under treatment in the ward for some six weeks. The paralysis is partial, and affects the left leg and arm. It came on suddenly, without loss of consciousness or even giddiness. The patient could, on admission, walk without assistance, but dragged the affected limb. He could also use the arm, but lacked firmness of grasp. Under the use of ten grains potassii iodid. t. d., with the application of the induced current, he is becoming rapidly better. The finger-nails, which have been stained, show no want of growth on the affected side.

A case of diabetes mellitus of about ten months' duration is at present under treatment in the male ward. The patient, who was formerly quite a robust man weighing one hundred and eighty pounds, has lost flesh so that he now weighs but one hundred and thirty-five pounds. His appetite is voracious, and he suffers from intense thirst, not alleviated by large quantities of

* We are indebted to the courtesy of the Attending and Resident Staff for the opportunity of making these notes.

water, which only causes nausea. His skin is dry and unspirable; he suffers from cramps in his legs, and is quite weak. The urine on admission had a specific gravity of 1034, which has fallen in the few days he has been under treatment to 1032, while the amount excreted in twenty-four hours has fallen from seventeen to fifteen pints. No albumen has been detected at any time. The treatment has consisted in opii gr. i, ext. belladon. gr. $\frac{1}{8}$, *ter die*.

A. V. H.

TRANSLATIONS.

IGNIPUNCTURE.—“*Quod remedium non sanat, ferrum sanat; quod ferrum non sanat, ignis sanat; quod ignis non sanat, insanabile dici debet.*” Dr. Paul Trapenard, prefixing his brochure of seventy-two pages (*L'ignipuncture—De ses différents Emplois—De son Indication spéciale dans les Tumeurs blanches*) by the above aphorism of Hippocrates, gives the results of his observations with this method of using fire. The discovery is due to Prof. Richet, whose pupil M. Trapenard was during five years.

Hitherto cauterization has been simply destructive or revulsive. A. *Destructive* action upon the tissues, to annihilate the dangerous effects of a known or of an inoculated virus, to modify fungous uterine ulcers, to combat hospital-gangrene, to cut down exuberant fungosities in general. The result aimed at has been the profound disorganization of the part, and the formation of an eschar. B. A *revulsive effect*, to displace deep-seated irritation after the manner of a blister. The practice of searing the skin over a joint affected with white swelling has been attended with good results. Rebellious neuralgias have been treated successfully by points of fire applied to the surface, etc. To these destructive and revulsive actions of cauterization M. Richet has added a *limiting* action. Ignipuncture, then, is a special kind of cauterization, of which the action is revulsive, substitutive, very slightly destructive, but *limiting*, and sometimes eliminative. It has been found useful in a multitude of affections, and particularly in white swelling. It consists in plunging a little cautery at various points into the bone, into the diseased joint, into the tissues, that are to be modified. The instrument is composed of four parts. 1. A handle, consisting of a metal piece sunk into a bit of wood twelve to fifteen centimetres in length. 2. A steel rod, fitting a socket in the handle. This may be fixed with a spring, so that the same handle serves for several cauteries. 3. A steel ball, two centimetres in diameter, at the end of the rod, which it, so to speak, reinforces. This is to concentrate the heat and hold it in reserve. 4. A needle of platinum, varying in size and length with the tissues to be acted upon. This is screwed into the ball. Steel so changes its color at different temperatures that it shows at a glance when the proper heat is reached. Six to eight cauteries are required. A white-heat enables the needle to penetrate with greater ease, and is less painful. In opening cysts a cherry-red is better, as the eschar becomes adherent to the cautery, and is withdrawn with it. Each needle is entered at a single thrust, and at once withdrawn, the points selected having been marked with ink beforehand.

As a rule, chloroform is not given. The pain is very intense, but of brief duration. For three days or less, wet compresses are to be applied to the cauterized parts. The action is—1, revulsive, a quality which it shares with cauterization in general; 2, evacuant; 3, limiting or modifying. The latter raises ignipuncture into a method. The tissues, in the lines of puncture are profoundly affected by heat. At the end of a few days suppuration is established. This diminishes little by

little, ceases, and the fistulous orifices close and become depressed. Meanwhile, the tumor diminishes. Cicatricial tissue occupies the lines of cauterization. These extend in various directions; hence arises a sort of *cirrhosis* of the tumor as contraction takes place, and a continuous and progressive compression of the affected structures comprised within those inodular brils.

White swelling (*tumeur blanche*) was the term applied by Richard Wiseman, in 1734, to a certain class of scrofulous affections of the joints. It is to-day restricted to affections of a purely scrofulous nature; nevertheless it is a generic term, under which are included chronic synovitis, chronic inflammation of bone, and chronic osteo-synovitis of this kind.

The effect of ignipuncture is obvious, safe, and of incontestable benefit—1, in pseudo-membranous synovitis in the second stage; 2, in fungous synovitis and osteo-synovitis in the second stage; 3, in progressive inflammation of the bone, whatever its nature.

M. Richet employed this method in a terrible case of necrosis of the jaw from phosphorus, in which, after the removal of the sequestrum, the disease continued, with the effect of arresting it. It is to be regretted that this case passed from under observation during the treatment.

Two cases of acute bronchocoele are reported, in which cures were effected by ignipuncture.

It is recommended in hypertrophic elongation of the neck of the uterus, and has been successfully employed in chronic ganglionic enlargements, in hypertrophic acne, and in tubercular disease of the testicle. Ignipuncture is inapplicable to aneurisms and to varicose tumors.

J. C. W.

SURGICAL INTERVENTION IN PROLAPUS UTERI, RECTOCELE, AND CYSTOCELE.—Dr. Bourdon, after giving several methods of operating in these accidents, offers the following conclusions. In cases where the prolapse, rectocele, or cystocele has appeared suddenly, the displaced organ should be replaced as quickly as possible. The practicable operations are not so dangerous as to cause hesitation in performing them where pessaries are found useless or inapplicable. In choice of an operation the age of the patient should be taken into account. In women who have passed the period of the menopause, the vagina and vulva may be completely obliterated. Perineoraphy is always indicated when laceration of the perineum exists, and often when the vulvar opening is too large. It can be combined with other operations. The simple restoration of the perineum is often sufficient to enable the patient to carry a pessary previously inapplicable.

The process by vaginal flap is preferable where there is laceration without rupture, but where rupture of the perineum exists the process of MM. Demarquay and Lefort, by rectal and vaginal flaps, may be employed. These flap-processes have the advantage over others of less frequently resulting in fistulae, and of making a narrow recto-vaginal septum which restrains the bulging of the rectum in rectocele.

Perineoraphy by the vaginal flap may be useful in cases of simple rectocele with laceration of the perineum; it should always be accompanied by episioraphy. This mixed operation is always practicable in aged women, and serves in cases where operations intended for narrowing the vagina are impossible to maintain in its normal position a voluminous or long-prolapsed uterus. The vulva in these cases should be almost entirely obliterated, as it is frequently less painful to an aged woman to have the vulva closed than to wear a pessary. Complete obliteration is useless, and has even at times caused serious inconvenience.

The best process of perineo-episioraphy is that of Kuchler, by which a solid barrier is formed in front of the vagina, capable of resisting the pressure of the viscera. Elytroraphy serves often with young women where it is not desired to narrow the vagina too greatly, and where the uterus is not too large or the prolapse too old. The first process of Sims, with Verneuil's modification, is excellent when used in the case of simple but voluminous cystoceles. Simple rectoceles and cystoceles may be relieved by Huguier's operation, or by the *pincés électro-caustiques* of Desgranges. The last process of Sims, modified, if desired, by the omission of the longitudinal "freshenings," is advisable in the case of young women, since only the bottom of the vagina is narrowed. Elytroraphy should be practised anteriorly or posteriorly, according to the predominance of cystocele or rectocele.—*Bull. Gén. de Thérap.*, Nos. 6 and 7, 1874. A. V. H.

VARIATIONS IN THE PROPORTION OF WHITE BLOOD-CORPUSCLES IN DISEASE.—M. Brouardel has ascertained by actual count that the proportion of white corpuscles in the blood varies considerably in certain diseases, according to the affection and the period of its course. In variola the white corpuscles appear to be augmented during the almost apyretic period which separates the fever of eruption from that of suppuration, they seem to diminish at the moment when the latter makes its appearance, and if, during the fever of suppuration or desiccation, the number of white corpuscles is seen to become augmented anew, it may be predicted that the patient is about to suffer subsequent suppurations, furuncles, abscesses, etc.

Other researches of M. B.'s, undertaken in patients who had recently suffered from wounds or operations, seemed to show that during the days following an operation the number of white corpuscles in the blood becomes augmented until they stand in proportion to the red globules as one to eight; that after suppuration is established the number of white corpuscles diminishes considerably; and finally, that if during suppuration the number of these latter augment anew, it cannot be predicted, as in variola, that new abscesses are impending.—*Gazette Méd. de Paris*. A. V. H.

A CASE OF CAMPHOR-POISONING.—Dr. Edward Polak (*Wiener Med. Presse*) has been induced, by noticing the report of a case of camphor-poisoning in a late journal, to publish the details of a case of this rare form of poisoning which came under his own observation. On the night of the 9th of May, 1873, he was called to a patient, and upon his arrival found a woman lying upon her back in bed and tossing her hands and feet uneasily about. Her face was strikingly pale, the eyes bright and shining, there was a moderate tension of the entire muscular system, and in the lower extremities slight cramps. The skin was cool but dry, the pulse strong and full, and beating 88 in the minute. The temperature was 38.4°C. A strong smell of camphor was perceptible in the expired air, and also upon that which was expelled by eructation. The patient was in full possession of her faculties, had vomited some warm milk which had been given her, and spoke in a low tone of voice. She complained of violent ringing in her ears, giddiness, oppression of the chest, a sense of fulness in the stomach, and from time to time of her legs falling asleep.

When the cause of her being in this condition was inquired into, it was found that the patient had taken two tablespoonfuls of camphor mixed with brandy and water. A short time after swallowing the dose she became unconscious, and after a time vomited five or six times, and among the matters which were thrown off in this way were found numerous pieces of camphor

of the size of a pea or a grain of Indian corn. She had taken the camphor upon the advice of a female friend, with the object of avoiding any further increase in her family, as she already had four children. Dr. Pollak treated the case with irritating enemata and wine and coffee, and ordered the application of cold compresses to the head, and in a short time the patient fell asleep. She broke into a profuse perspiration, and passed a considerable quantity of clear urine, which had a distinct odor of camphor. The perspiration had no odor except that usually noticed. The nausea and the subjective symptoms noted above speedily ceased, but for nearly three weeks the patient had more or less muscular weakness, giddiness, and gastric disorder, all of which symptoms, however, speedily yielded to treatment. The camphor did not effect the object with which it had been taken, for in due time the patient, then in full health, became for the fifth time a mother. W. A.

ACUTE ABSCESS OF THE LIVER FOLLOWING CONTUSION OF THE PERINEUM.—Dr. E. Vallin relates in *L'Union Méd.*, Nos. 37 and 38, 1873, the case of a healthy man who had abscess following contusion of the perineum. Some time after the healing of this abscess, which pointed near the anus, and seemed purely local, the man was attacked by chills, fever, and night-sweats. At the same time enlargement of the liver was observed, with great tenderness in the right hypochondriac region; the patient emaciated rapidly, and the case seemed likely to terminate fatally.

Suddenly one day, however, the man, who was making an effort to vomit, "felt something crack inside," and soon after threw up about eight ounces of exceedingly fetid pus mingled with bile. From this moment he grew rapidly better, and recovery soon followed.

Dr. V. explains the case thus: A phlegmon in the ischio-rectal adipose tissue, an abscess, probably extra-aponeurotic, phlebitis of some hemorrhoidal veins by which putrid material was conveyed to the inferior mesenteric and thence to the portal veins, thus giving rise to an abscess of the liver, which, opening into the stomach, spontaneously terminated rapidly in recovery. A. V. H.

INFLUENCE OF MUSCULAR EXERTION ON THE METAMORPHOSIS OF ALBUMEN.—Some experiments performed on himself by Dr. Schenck, and published in the *Archiv für Exper. Path. u. Pharmacol.*, possess considerable interest as bearing upon the question of the relation of urea to exercise. While consuming food the exact nitrogenous contents of which were known, Dr. S. placed himself under various conditions of rest, exercise, and sleeplessness, examining with the utmost care his daily excretion of urea.

Two series of experiments were performed, one in winter, the other in summer, and the result, according to Dr. S., shows no direct relation between the performance of work and the excretion of urea. Sometimes while work was being performed to a very considerable amount the urea instead of increasing would decrease, and *vice versa*. Further researches would seem advisable to throw light on this side of the question. A. V. H.

WHOOPIING-COUGH.—Bromide of ammonium in doses of gr. iss to gr. v three, four, or more times a day, with the use of a four per cent. solution of bromide of potassium by means of the atomizer or vapor-inhalations.

CARBOLIC ACID is recommended by Ebstein and Müller for internal use in diabetes. Five to seven grains may be administered daily, in divided doses.

THERAPEUTIC NOTES.

TOPICAL APPLICATIONS IN OTORRHOEA.—M. Ménière in a clinical lecture on otorrhœa gives the following formulæ as convenient and useful in many cases. Although they cannot always be expected to exercise a curative influence, yet joined to appropriate internal remedies they are in a high degree serviceable.

In "earache" one or two leeches are to be applied behind the ear, which may afterwards be covered with a poultice sprinkled with laudanum. At the same time two or three drops of the following solution may be dropped into the external meatus:

R Aconitiæ, gr. i;
Aqua, f3v.—M.

This solution gives better results than laudanum, chloroform, etc., so frequently used. Should the pain be intense, general anodynes may be employed. In chronic otorrhœa the external meatus should be kept thoroughly clean by frequent injections of tepid water, and may in addition be painted once a day with the following solution:

R Acid. carbolic., gr. i;
Glycerin., ʒi.—M.

This solution acts very satisfactorily in modifying the character of the secretion; it is sometimes necessary to increase the proportion of carbolic acid. A ten per cent. solution of nitrate of silver painted upon the internal meatus will often serve a similar purpose. M. Ménière frequently employs the following solution in cases of chronic discharge from the ear. It has the advantage that the patient can apply it himself:

R Zinci sulph., gr. iv;
Glycerin., f3ii;
Aqua, f3vi.—M.

Three to six drops are allowed to fall into the ear, which has previously been thoroughly cleansed with tepid water. The head is to be retained in the inclined position from eight to twelve minutes.

The following solution may be used when great vascularity of the bottom of the ear exists, even where there is perforation of the tympanum:

R Plumbi acetat., gr. ss ad i;
Aqua, f3ss.—M.

A NEW APPLICATION FOR OLD ULCERS is always in order, and no apology is necessary for giving the following, which was very highly lauded by a writer in the *Lancet* a year or two ago, and has been made the subject of a communication to one of the French journals, recently. It consists of flour, four ounces; tragacanth, one-half ounce, powdered; acacia, one ounce, powdered; chalk, one drachm; one egg; water, one pint. Put these materials in a stew-pan, and bring them nearly to boiling, then allow the mixture to cool, and add water to form the whole into a thin paste, which may be applied twice daily, without washing off. The ulcer to be covered with a soft rag. The mixture should not be allowed to become sour.

THE BEST METHOD OF USING CHLORATE OF POTASSIUM TOPICALLY.—Prof. Gosselin, having experienced the frequently unsatisfactory performance of this remedy when used locally in cases of mercurial stomatitis, etc., has devised the following method, which he recommends strongly. A concentrated solution of the salt, mixed, if necessary, with a little laudanum to quiet any pain caused by the stomatitis, is placed upon pieces of lint and introduced into the gingival gutters on each side of the mouth. These pieces of lint are to be renewed at short intervals during the day, and may be alternated with the salt in the usual form of a gargle.

SULPHATE OF CADMIUM IN BLENNORRHOAGIA.—M. Gazeau recommends injections of this salt instead of those of sulphate of zinc, on account of its more highly stimulating and astringent qualities. In the acute stage, the injection may be made of the strength of one-half grain to the ounce of water, to be used every two hours. Copaiba may be administered for the first few days, and cases are frequently cured in five or six days. In chronic blennorrhagia the following combination should be used:

R Cadmii sulph., gr. xvi;
Bismuth. subnit., ʒvss;
Aq. dest., ʒiiiss.—M.

Sig.—Inject after each urination.

TREATMENT OF DIPHTHERITIS.—Carbonate of potassium, according to Dr. Kuhn, modifies the action of the mucous membrane of the throat and air-passages generally in such a way as to arrest the formation of false membrane in this disease, or if given early, and in sufficient quantity to cause alkalinity of the fluids of the mouth, may even prevent its appearance. In infants the dose is sixteen grains to one drachm, daily; in adults, one and a half drachms in the twenty-four hours may be administered. In some cases Dr. Kuhn has used lime-water as an adjuvant.

CURE OF FISTULÆ BY CHLORIDE OF ZINC.—M. Simbat, at the Val-de-Grâce Hospital, uses pledgets of lint smeared with the well-known Canquoin's paste, for this purpose, particularly in cases of fistulæ in ano. Its advantage consists in its stimulant action on the walls of the fistula, the ease with which it may be applied, the absence from the danger always accompanying operations with the knife or other instruments, and, finally, the improbability of a relapse after its use.

QUININE IN UTERINE HEMORRHAGE.—Dr. Deneffe uses quinine in cases of post-partum hemorrhage, and also in those hemorrhages so frequent at the period of the menopause.

The dose recommended by Dr. D. is two grains per hour in the form of pills, continued until at least twenty grains have been taken.

CHLORAL IN PREMATURE LABOR.—M. Martineau makes use of enemata containing sixteen grains chloral hydrate in four ounces of water, in cases where premature labor has set in. If the first injection does not quiet the pains, it may be repeated at intervals of several hours. Chloroform is said to be formed in the bowel by the action of the fæces, which are usually alkaline.

FOR CONSTIPATION.—

R Aloës Socotrinæ, gr. xv;
Ext. anthemidis, gr. xv;
Ext. rhei, ʒss;
Zingiberis pulv., gr. viii.—M.

Divide into twenty pills; one or more at night as required.

LOTION FOR FETID PERSPIRATION OF THE FEET.—

R Potassii permanganat., gr. xxx;
Aqua, f3iv.—M.

The lotion to be applied morning and evening, and the feet to be afterwards powdered with lycopodium or starch.

POMADE FOR VENEREAL ALOPECIA.—

R Hydrarg. protiodid., gr. xv;
Axungia, ʒv;
Tinct. cantharidis, ʒiss to ʒiv.—M.

Apply morning and evening, using at the same time appropriate internal treatment.

PHILADELPHIA MEDICAL TIMES.

A WEEKLY JOURNAL OF

MEDICAL AND SURGICAL SCIENCE.

The Philadelphia Medical Times is an independent journal, devoted to no ends or interests whatever but those common to all who cultivate the science of medicine. Its columns are open to all those who wish to express their views on any subject coming within its legitimate sphere.

We invite contributions, reports of cases, notes and queries, medical news, and whatever may tend to increase the value of our pages.

All communications must bear the name of the sender (whether the name is to be published or not), and should be addressed to Editor Philadelphia Medical Times, care of the Publishers.

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EDITORIAL.

THE AMERICAN MEDICAL ASSOCIATION.

THE report of the doings of the Association at the meeting in Detroit, which we laid before our readers in a late issue, has given each an opportunity to form his own judgment as to the actions and achievements of the redoubtable organization. Probably most will agree with us that the national body was excelled in the interest of its transactions, as it was in the numbers of participants, by the Massachusetts State Society. Concerning fractures Dr. Sayre certainly offered some remarkable statistics; but the only conclusion which it seems to us can be drawn from the prolonged discussion is that Dr. Sayre's measurements were made too early in the cases to be in any sense decisive. Leaving out of sight this matter, the Detroit gathering does not appear to have yielded any scientific fruits whatever. But then there was no quarrelling. Truly, it is a blessed thing to see brothers dwelling together in unity; but we hope our readers do not have to travel a thousand miles to enjoy four days of peace!

For the sake of our foreign contemporaries, we want to deny emphatically that the convocation was in any true sense representative of the American profession. We do not in any way wish to disparage our Western brethren, but it is a simple fact that by far the largest portion of the leading minds of the profession are to be found in our Eastern

cities. The most influential periodicals, with a very few exceptions, are there issued; the American medical works almost all have such nativity; the chief medical schools of the country are there situated, and the facilities for higher medical self-education, for study and investigation, do there most abound. Yet at the late meeting these cities were scarcely represented at all. Boston, we are informed, sent one delegate, New York thirteen, and Philadelphia nine. Moreover, with very few exceptions, these representatives were not men of prominence at home,—excellent physicians, no doubt, but not writers, teachers, or practitioners of national reputation.

We fear this meeting is but an index of what is to become more and more marked,—a loss of national character to the Association, a loss which we take to be an almost necessary result of the appointment, year after year, of sessions in the far West.

Wisely or unwisely, it was agreed to restrict representation to the county medical societies, and thereby cut off such bodies as our College of Physicians, some of them the very cradles, or rather parents, of the Association. We do not doubt that the College can endure it, but whether the Association can, is another question. To us it is sheer folly to think that men are to be driven into the county medical societies for the purpose of going to the American Medical Association. The trouble has been that when every facility of entrance has been offered, our best men, with few exceptions, all stayed at home; and now it is proposed to get them in by barring the doors. This is allopathy with a vengeance, and calls to mind the familiar allegory of the three wise men of Gotham.

IF anything further were necessary to show the utter worthlessness of the chemical evidence upon which Mr. Schoeppe and Mrs. Wharton were so near conviction, it may be found in the report of Prof. Aiken upon the gas of Baltimore City,—a report which has been severely handled by Prof. P. B. Wilson in the *American Engineer* of the same city. In it we are told, *inter alia*, that sulphurous acid is very probably present in the gas, and also that “ammonia is always present, and apparently in a very unnecessary quantity.” In all seriousness, remembering that one poor and probably innocent colored woman has been hung upon the testimony of the chemist who publishes officially such nonsense, is it any wonder that some feel indignant at this prostitution of the sacred calling of expert?

CORRESPONDENCE.

DOINGS OF THE NEW YORK SOCIETIES.

Action of Quinine on the Ear—Hydrophobia—Morbid Impulses—Tapping in Pyonephrosis—Treatment of Sciatica.

NEW YORK, June 12, 1874.

A FEW weeks since, a paper was read before one of the prominent societies of this city, by Dr. Roosa, upon the Etiology and Treatment of the Diseases of the Internal Ear, in which he referred to the action of quinine as a remedy. He asserted that when given where congestion of the internal auditory apparatus already existed, quinine would aggravate the disease, and, therefore, produce cerebral congestion.

Dr. Jacobi did not agree with Dr. Roosa, but contended that quinine produced cerebral anæmia, and therefore it was a proper remedy to administer in that condition of the auditory apparatus spoken of.

Dr. Hammond agreed with the first-named gentleman; but, in order to test his convictions, he experimented upon himself, assisted by Dr. Roosa. Before the experiment was begun, his ears and eyes were examined by the auriscope and ophthalmoscope, and found to be in a normal, uncongested condition. He then took quinine, with the results anticipated. The blood-vessels of the tympanum and retina exhibited marked congestion. A dog was also experimented upon. After trephining the skull, quinine was given. A tube was then inserted into the opening. At the lower end of this tube a very thin membrane had been placed, and in the tube a colored fluid. The apparatus being inserted into the skull so that the thin membrane would touch the dura mater, a short time after the administration of quinine the fluid began to rise, and continued to rise for several hours; when, as the influence of quinine began to disappear from the system, the fluid in the tube began to descend, until it finally settled down to its original position, showing most conclusively that the action of quinine upon the brain is to induce a greater amount of blood to flow into it, thereby producing congestion, and consequently leading one to infer that the theory of Dr. Roosa is correct.

While upon the subject of dogs, it may be well to speak of hydrophobia. Dr. Charles P. Russell lately read an elaborate paper upon this subject. After sketching at length the history of the disease, he touched upon the question whether there was any truth in the commonly-accepted theory that hydrophobia is more prevalent during dog-days, or the summer months, than at any other season of the year. While it prevails to a greater or less extent at all seasons of the year, yet, according to a table made in the last century, it appears that out of 2407 dogs affected with hydrophobia there were in the spring 671, in the summer 580, in the fall 583, in the winter there were 573. According to this statement, the summer presents comparatively very few cases. He argues, therefore, that the muzzling of dogs during hot weather is not only unnecessary and barbarous, but tends to worry a dog into the commission of acts, while trying to overcome the discomforts of a

muzzle, which he would not otherwise be guilty of. He thinks that the best method of preventing depredations by the canine population is to place upon them a heavy tax. Worthless curs would soon disappear, and valuable dogs would be taken care of.

Before the New York Medico-Legal Society Dr. Hammond read a paper on Morbid Impulse considered in its Medico-Legal Aspect. He arrives at the following conclusions:

1. A person aware of the existence of an impulse to commit crime, and which he fears he may not be able to resist, is bound to do everything in his power to render the accomplishment of his propensity impossible. It is his duty to place himself immediately under restraint. If he does not, he is morally and legally in no better position than a ruffian who feels an impulse to acquire other people's property and accordingly murders the man most convenient for his purpose.

2. The individual who is clearly shown to have yielded to a previously unfelt impulse to commit crime, and who, accordingly, perpetrates an otherwise motiveless offence, or one which in his normal condition would evidently not have been committed, is too dangerous to society to be allowed to go at large. He ought to be placed under permanent restraint.

3. Those morbidly constituted individuals who commit crimes because it is pleasant for them to do so, should be treated like other offenders against the laws.

4. The fact that a murder has been committed in order that the perpetrator might secure his own execution, is not a palliating circumstance. Those who contend that it is, seem to be actuated by the erroneous idea that suicide is necessarily the act of an insane person.

5. A morbid impulse to crime experienced by an insane person demands continued sequestration.

6. But the plea "I could not help it," is one which every member of the criminal class can urge with as much force as the subject of morbid impulse, and, when it stands alone in an otherwise sane individual, should be absolutely disregarded by juries and judges.

At the N. Y. Pathological Society Dr. Loomis exhibited a fluid which he took as a text upon which to remark concerning a new operation in surgery introduced to the profession by Dr. F. D. Lente, of Cold Spring, N.Y. It was for a disease designated pyonephrosis, or an accumulation of pus in the kidney. The operation consists in cutting down upon the kidney through the quadratus lumborum muscle, and inserting a canula or tube for the purpose of effecting a drain. Dr. Lente's patient recovered. The patient of Dr. Loomis, a Bellevue Hospital case, did not recover. The case went on well for a few hours, but a sudden change supervened, and he died. The operation is spoken of very highly in this city, and deserves to be tried again under more favorable circumstances.

In a paper read by Dr. T. M. B. Cross, upon the subject of sciatica, he described a method of treatment which, although not altogether new, yet is sufficiently interesting and important to forward you. It is appli-

cable especially in those cases not dependent upon causes which require a specific mode of treatment, such as malaria, pressure, and the like. Let a line be drawn from the trochanter major to the tuberosity of the ischium, bisect the line, and let fall a perpendicular; at about four inches down the perpendicular and one inch externally to it will be a point where the great sciatic nerve may be reached most conveniently. It lies about from one inch to one and a half inches below the external surface of the limb. Now take a very delicate subcutaneous syringe (having previously placed in it about four minims of Magendie's solution of morphia), and carefully puncture the limb a sufficient depth to enter the nerve or the sheath of the nerve, and inject the solution. The sensation will be a thrill along the course of the nerve, and a tingling or formication in the foot, if successful; at any rate, the pain will soon cease; and sometimes one application will suffice to cure a very obstinate case. After awhile the thrilling sensation after injection ceases, which indicates that the dose may be diminished, and finally omitted. He recommended the continuous current also, either in conjunction with the injection or separately.

PROCEEDINGS OF SOCIETIES.

PATHOLOGICAL SOCIETY OF PHILADELPHIA.

THURSDAY EVENING, APRIL 23, 1874.

THE PRESIDENT, DR. WM. PEPPER, in the chair.

DR. R. M. TOWNSEND presented a specimen of *undescended testicle, and medullary sarcoma of the testicle, occurring in the same individual*, and read the following history:

Saturday, April 4, 1874, I was consulted by D. R., mate of a transatlantic barque, on account of a supposed hernia. He was wearing a truss at the time that had been ordered for him in Liverpool. He gave the following history. He is 32 years of age, a native of northern Prussia, and has followed the sea since his fourteenth year. When six years old, he fell upon a plough, inflicting a severe bruise upon the perineum. He first noticed his present condition three months ago, as a swelling within the scrotum. At the end of two months it had sensibly increased, and considerable pain had become incorporated with it. For the past month both pain and swelling have been rapidly progressive: the former, especially, so severe that for the last fourteen days of his trip to this port he was incapacitated for work, and had to keep his berth.

Examination of the tumor, after removing the truss, revealed a tense mass with an obscure feeling of fluctuation. It was evidently not a hernia, presenting none of the characteristics of that affection. The introduction of an exploring-needle failed to bring away anything but a few drops of blood. I was unable in my examination to detect the presence of either testicle other than as a component of the mass. There was no enlargement of the cutaneous veins of the scrotum, or of the neighboring lymphatics. The man's general health was good, and he presented no evidences of a cachexia. He denied any venereal taint, and, with the exception of yellow fever in the West Indies, all forms of previous sickness. His mother is living and healthy, as

likewise are four sisters. His father died of rheumatism two years ago.

Some degeneration of the testicle being manifest, an operation, in the shape of an exploratory incision, and, if necessary, removal of the affected organ, was proposed as the surest means of relief. The patient assenting to this proposition, he was accordingly placed under the influence of ether, April 15, and, with the assistance of Drs. Maury and Graham, I removed the organ. Previous to the preliminary incision the feeling of fluctuation seemed to be so well marked that I was induced to introduce an aspirator. Nothing came away, however, but a few drops of frothy blood. As soon as an incision was made into the testicle a brain-like matter immediately protruded itself. The finger alone was used to clear away the mass, and after it had all been removed the vaginal tunic shone out clear, white, and unaffected. The latter, after ligation of the cord, was removed. But a few drops of blood were lost during the operation.

The removal of the diseased testicle revealed that its fellow had not descended. As the man has had both sexual desire and intercourse, however, since within a time that the descended testicle must have been utterly destroyed, it bore out the inference that one testicle had failed to descend. Examination failed to reveal its whereabouts.

A careful microscopic examination of the removed mass was made by Dr. Bertolet, who reports as follows:

"The softer portions of the growth are made up of a large round-celled parenchyma. The nuclei are also of a relatively large size, and surrounded with granular protoplasm. The intercellular network is well developed, has a soft consistence, and at many points is hyaline, at others again, finely fibrillated.

"The greater part of the tumor presents these microscopic appearances, as briefly mentioned, and can therefore be designated as a *medullary sarcoma*. But there are noticeable at several points hard lumps, not much larger than a pea, which are very firm, white in color, and transparent on thin section. These lumps, upon section, were found to be true hyaline cartilage, requiring, therefore, no further detailed description.

"It was only in a few portions of this pulpy mass that any traces of the tubuli seminiferi were discoverable, but these were so characteristic, and the tubuli distended with irregularly-shaped epithelial cells presenting many protuberances, so as to leave little doubt that active proliferation of the epithelial elements had occurred, and that this mixed growth is to be regarded as being in part carcinomatous, as well as sarcomatous."

May 2.—The ligature came off the cord.

May 9.—The patient has convalesced, and goes to sea again in two days. Since the operation he has suffered severely from colicky pains and constipation. A teaspoonful of the fluid extract of taraxacum at night, followed by a saline in the morning, finally gave relief.

DR. R. M. BERTOLET said the testicle was one of the favorite seats not only of all the varieties of sarcoma itself, but also of all the histioid formations found in sarcoma. It is in the testicle that we have the best opportunity of studying heterologous formations. We have here occurring not only the cartilaginous, but as well the adipose, striped, and unstriped muscular tissues, and the different forms of fibrous and myomatous tumors. Indeed, there are sometimes here recognized all these varieties alongside of each other. Enchondromata and myomata may occur as primary growths, go on for a time without giving rise to serious trouble, but finally become painful. A growth may be originally sarcomatous, and after a time in it may appear the elements of cartilaginous or muscular tissue. We have in this instance a sarcoma in the interstices of which are found cartilaginous elements.

But what is perhaps more important to the surgeon is the course of the disease. Sarcoma starting from the testicle, and not from the epididymis, is generally retained for a time by the tunica albuginea, but if this membrane is once broken the growth spreads very rapidly, entering the cavity of the abdomen and involving the retro-peritoneal glands. If this growth, therefore, has not extended along the spermatic cord, although the medullary sarcomata, as well as the medullary carcinomata, are in the highest degree malignant, there may be no further extension of the disease.

Dr. H. B. REED presented, for Dr. H. B. HARE, a specimen of *aneurism of the abdominal aorta*, from T. W., æt. 44, married, who was admitted to the Episcopal Hospital, April 8, 1874, suffering from severe pain in the epigastric region.

It was difficult to get a satisfactory history from him, but so far as could be learned he had enjoyed average health until the summer of 1873, during which he suffered from time to time from some abdominal uneasiness. He had been in the habit of drinking moderately, though not to excess, and attributed his slight symptoms to dyspepsia, arising, possibly, from this cause.

Towards the end of the summer, in attempting to move a piece of furniture, he thought he felt "something give way inside of him," and suffered slight pain, which soon wore off, leaving no great impression on his mind.

In the early autumn he found his strength failing, though, except the slight abdominal distress, no particular symptom attracted his attention, and in the month of October (1873) he was admitted to the hospital, where a diagnosis was made of cirrhosis of the liver,—a diagnosis fully borne out by the post-mortem appearances.

He stayed in the hospital at that time but a few days, leaving it of his own accord, and returned to his business of tailor. Gradually he became unable to attend to this, and by Christmas-time would have occasional paroxysms of sharp pain at the epigastrium. These increased in frequency and violence, and he noticed by the end of January that they were apparently induced or aggravated by taking food. About this time, also, but not, so far as could be learned, before, slight pain in the *lumbar* region was felt.

Gradually the pain in the epigastrium increased, until at length by March the paroxysms became at times almost unendurable, and he acquired the habit of taking large doses of opium to allay them, which it would do. His appetite, which had been fair up to this time, decreased, and he became emaciated. He had no pain of any kind except at the epigastrium, where it was paroxysmal, and in the lumbar region, where it was almost constant and dull.

On admission he was quite emaciated, sallow, and low-spirited. Examination of the epigastric region revealed a spot about an inch square, at which a thrill was perceived at the slightest touch. Under this spot, it afterwards appeared, the left lobe of the liver was forced up against the abdominal parietes by the aneurismal sac. Elsewhere firmer pressure was needed to detect the thrill, but on auscultation a very loud blowing sound was heard, most marked at the epigastrium, but audible over the whole anterior surface of the abdomen. There was some prominence of the abdomen, and abnormal firmness at, and for a few inches below, the epigastrium. Posteriorly no thrill of any kind could be detected, but careful auscultation revealed a very faint blowing sound to the right of the spinal column and on a level with the twelfth dorsal vertebra. This sound could not be detected anywhere else posteriorly.

No change of any kind was detected until the after-

noon of his death, three days after admission, when he was attacked by violent pain in the region of the heart; and while the resident physician was endeavoring to relieve this, the man began to sink. He died shortly afterwards. Before his death, palpation showed that the tension of the abdominal wall over the aneurism had been removed; this occurred about three minutes before his death.

Autopsy by Dr. H. B. Reed, twelve hours after death.

The *heart* was fatty, and contained some fibrous clots. The lungs were congested, and there were pleuritic adhesions.

A broad, thin, fibrous clot hid from view all the abdominal viscera, with the exception of the liver; the left lobe of this organ was folded upon itself, and held in that position by adhesions.

After the removal of this clot the intestines were exposed to view. They occupied "in toto" the left iliac and left lumbar regions, they being forced into this position by a large clot of blood which occupied the corresponding regions of the right side. This clot, caused by the rupture of the aneurism, contained the right kidney. The *pelvic cavity* was filled with serum. The *spleen*, *intestines*, and *left kidney* were, to the appearances, in a healthy state, but anæmic. The *spleen* was, however, much smaller than natural.

The situation of the aneurism was over the eleventh and twelfth dorsal and first lumbar vertebræ. In character it was sacculated, springing from the posterior wall of the abdominal aorta. The eleventh and twelfth dorsal and the first lumbar vertebræ were eroded by the pressure of the aneurism.

Dr. O. H. ALLIS asked as to the *degree* of pulsation in the femoral arteries.

He stated that he had lately, through the courtesy of a medical friend, seen a case presenting two very prominent symptoms of aortic aneurism, viz., pulsation and murmur. In this case the force and volume of the femoral pulse were most striking features, and suggested at once the improbability of aneurism.

He desired an expression of the clinical experience of the members present upon this point, as in his own mind it was clearly impossible for an aneurism to exist and not materially affect the *force*, *volume*, and *character* of the blood-current beyond.

The PRESIDENT said it was a matter of comparatively frequent observation that aneurism of the abdominal aorta interferes in a singularly slight degree with the pulse in the femorals, much less than aneurism of the ascending aorta and arch with the pulse in the great vessels coming off of it. This he thought was partly because of the fact that in the former instance the lumen of the vessel was much less interfered with; the tumor frequently springing from one side. It is also true that the arterial system beyond the tumor is at times enlarged, so that there is increased pulsation of the vessels from this cause. It is further the case that the heart sometimes becomes hypertrophied, so that there is increased pulse from this cause also. In this case also he thought it might be interesting to discuss the cause of the aneurism, as the arteries appeared uniformly healthy, and there was no syphilis.

He asked Dr. Reed whether there had been any traumatic element in the history of the case.

Dr. H. B. REED, in reply, alluded to that part of the history which stated that some time previously, while moving furniture, he had felt something give way, and that for a short time afterwards he had had pain and uneasiness in the abdomen, but that these had passed away, and he had not been troubled for some time.

Dr. C. B. NANCREDE asked whether the localized pulsation could not be explained through the influence of the sympathetic plexus supplying the femoral artery. Would not the abdominal aneurism press on the solar

plexus and abdominal sympathetic, and thus influence the pulsation? Dr. N. had known a case of abdominal aneurism lower down, in which there had been profuse diabetes insipidus, also, perhaps, explainable through some influence on the sympathetics.

The PRESIDENT said he was not aware that this explanation had ever been advanced to explain the increased pulsation of the femorals under such circumstances. It is generally recognized that a certain degree of disturbance of the sympathetic will produce local pulsation of the vessels supplied by the part of the nerve affected; as in cases of exophthalmic goitre. And, further, it is certain that the abdominal ganglia of the sympathetic are often implicated in cases of abdominal aneurism. This is shown not only by post-mortem dissections, but during life, by the disturbances of secretion of the mucous membrane and of the skin of the lower part of the body. In some cases, published by himself a few years ago, profuse secretion had been observed in connection with abdominal aneurism; and in one very singular instance, when the patient turned from one side to the other there was a complete change in the area of the sweating, the half of the body on which he was lying becoming bathed in sweat, while the opposite half would dry off.

Dr. JOHN ASHHURST, Jr., said that he thought the differences observed in various cases in regard to the degree of pulsation noticed in the arteries below the aneurismal tumor were mainly to be accounted for by the condition of the aneurismal sac in each particular case. The diminished pulsation commonly met with he believed to be chiefly due to the mechanical action of the sac-walls in equalizing the blood-current and thus lessening pulsation, just as the air-chamber does in the ordinary "hydraulic ram." This action would probably be less marked in a sacculated than in a fusiform aneurism, and it would also vary with the condition of the sac as regarded the presence of laminated clot, which if existing in large quantity would of course diminish the resiliency of the part.

With reference to the *causation* of the aneurism, Dr. A. thought that it was not uncommon for the development of the disease to be traceable to an injury such as was met with in the case under discussion. A man receiving a sudden blow, or making a violent lifting or straining effort, might suffer rupture of the inner coat of the aorta or other large artery, perhaps at the time experiencing the sensation of something having given way, and a few weeks afterwards an aneurism would be found at the point of injury. This might occur whether the vessel were healthy or diseased, and many aneurisms thus resulted from injury which yet were not classified as "traumatic."

The PRESIDENT asked Dr. Ashhurst whether much importance could be attached to the stand-pipe action in the diminished pulsation of the vessels of the neck and arm attending aneurism of the arch of the aorta. Is there not often to be found an alteration in the mouth of the artery whose pulsation has been most influenced? In all cases where there had been marked diminution in the radial or carotid pulse, he had found after death that, owing to the stretching of the walls, the corresponding orifice was slit-like, and therefore greatly diminished, or that the walls of the artery shared in the atheroma of the larger vessel, and that its orifice was therefore more or less occluded.

Dr. ASHHURST said that no doubt the President's explanation was applicable in certain cases, particularly in those of aneurism of the aortic arch; in other cases the direction in which the growth of the sac occurred was to be taken into account, the pressure caused by the enlarging aneurism sometimes impeding the circulation in the artery on the distal side of the sac, and even, it was said, thus leading to the cure of a second aneurism

when two existed in the course of the same vessel. The chief and most important cause of diminished pulsation, however, he believed to be that to which he had already referred, viz., the mechanical action of the sac-walls.

Dr. H. LENOX HODGE exhibited the *carpus and articular extremities of the radius, ulna, and the second and third metacarpal bones*, which he had removed this day at the Presbyterian Hospital, on account of chronic arthritis of the wrist. The patient is a man about 35 years of age, who has suffered from chronic arthritis for the last two years. The pain has been very great. Abscesses have formed and have been discharged on the back of the hand, on the front of the fore-arm, on the palm of the hand, and on the palmar surfaces of thumb and forefinger. The excision was done after Lister's plan. The lower ends of the ulna and radius, including the radio-ulnar articulation, the whole carpus except the pisiform bone and the hooked process of the unciform, and the carpal extremities of the metacarpal bones of the forefinger and third finger, were removed. The carpal extremities of the metacarpal bones of the thumb and of the fourth and fifth fingers were healthy, and, contrary to Lister's recommendation, were allowed to remain. In excision of the knee-joint no harm results from leaving part of the femur covered with its cartilage if healthy. It was, therefore, thought that in the case of the wrist also, healthy bone covered with sound cartilage could be left without danger, and that these carpal extremities of the metacarpal bones would add to the future usefulness of the hand. Above the section made by the saw there was an abscess in the radius: to this the gouge was freely used.

Such extensive disease of the wrist is comparatively rare. It is the first case which Dr. Hodge has seen in which he thought excision necessary. In this case, as well as in a number of others of similar nature, Dr. Hodge has made use of Esmarch's apparatus for the prevention of hemorrhage, with great satisfaction. There was no bleeding during the operation, and no ligature was requisite after the elastic band was removed. All tendency to hemorrhage was arrested by dry lint.

Dr. ALLIS asked whether new sheaths are formed over these exposed tendons after this operation, and whether they are lubricated by the same fluid as in health.

Dr. Hodge said he had avoided opening the sheaths when he could. The tendons which were divided, and of which the sheaths were, therefore, also divided, were the extensors of the wrist, the two radial, and the ulnar. One portion of the common flexor of the fingers was also partly exposed, but not so as to interfere with its sheath. The tendons were divided at the extremity of their insertion, and therefore the lubrication of the sheath would remain in its totality. The one most difficult to avoid is the ulnar extensor, and he was therefore careful to cut between it and the bone, and thus to preserve all its surrounding structures. He thought that if this operation was carefully performed, the sheath of the tendon would not be injuriously interfered with.

The PRESIDENT read the following notes of a case of typhoid fever with unusual symptoms, and exhibited the specimens.

Typhoid fever—Anomalous course of temperature—Marked symptoms of spinal irritation—Death on ninth day (?)—Characteristic lesions.—John Keller, æt. 38, German. On admission, 4th of April, 1874, complained of dyspeptic symptoms, with constipation. He seems to have improved under treatment, and was only seen in the wards at meal- and bed-times. On the 8th he was noticed by the night-nurse to have a staggering gait; he was stupid, and temperature 101 $\frac{3}{4}$ °. Next morning temp. was 104 $\frac{3}{4}$ °; pulse 102. Hardly any history could

be obtained from him; he had been living about Front and Race Streets.

Much stupidity, and at times a condition of comatosis. Marked tremor, and great rigidity of all the muscles. No eruption, no sordes; constipation; slight meteorism; no tenderness; apparently nowhere any pain; urine high-colored, not albuminous, with slight diminution of urea; had to be drawn with catheter. No cough or sputa. Physical examination: resonance rather exaggerated anteriorly; dulness over the two bases posteriorly; marked absence of respiratory murmur throughout the lung. A double pericardial friction-sound heard at the base of heart. 9th, evening temp. 104° ; pulse 120. 10th, morning temp. $103\frac{1}{2}^{\circ}$; pulse 125; resp. 30; evening temp. 103° ; pulse 144; resp. 30. At 11.45 P.M. he was found unconscious, rigid, motionless; temp. $106\frac{3}{4}^{\circ}$; pulse 145; resp. 45. He was packed in cold sheets wet with cold water for two hours, when temp. fell to $101\frac{1}{4}^{\circ}$. During the day and night of the 11th the temperature showed a constant tendency to rise, so that only by repeated packing could it be kept between 100° and 103° . At 10 P.M. it reached 105° , but was soon brought down to $100\frac{3}{4}^{\circ}$; finally, at 6 A.M. of the 12th, he died, with a temperature of 105° . His other treatment has consisted of quiniæ sulph., grs. xxiv daily, concentrated nourishment, eight ounces of whisky daily, and the use of febrifuge draughts.

Post-mortem, ten hours after death.

Thorax.—The lungs were congested, especially in their postero-inferior portions, where they presented a condition approaching splenification. The pericardial sac is not distended. On opening pericardial sac, about two ounces of clear serum are found. There is a patch of lymph on the anterior surface of aorta, one and one-fourth inches above the origin. This lymph does not seem recent, as it is tough, and there appear to be new-formed vessels. There are several milk-spots over surface of the heart.

Heart.—The cavity of the left ventricle almost obliterated by firm contraction of walls, without contents. The right ventricle contains a little dark fluid blood. No lesion of the valves. The lining membrane not stained.

Abdomen.—There is marked retention of warmth. The liver is of moderate size; its tissue pale, somewhat congested. The spleen double the natural size; tissue much softened; no abnormal deposit. The mesenteric glands greatly enlarged, pinkish, and dry. The *intestines* greatly distended with gas, and containing fluid fecal matter. The lower three feet of the ileum were opened; there was marked injection of the mucous membrane. The solitary follicles were greatly enlarged, and Peyer's patches, especially towards the valve, were also enlarged, with prominent raised borders and enlargement of the orifices of the follicles. The patches were of a pale grayish color (medullary infiltration).

Head.—Vessels of the dura mater were slightly injected. The arachnoid over the convexity near the sinuses and along some of the larger veins was milky and thickened; chronic inflammation. No abnormal effusion.

Kidneys.—Cortex pale and probably fatty. About one pint of urine was found in the bladder.

Microscopic examination.—The uriniferous tubules were filled throughout the kidney with fatty cells, decidedly granular, and, rarely, some free oil-drops. There was also some degeneration of the liver. The heart-muscle was fatty; the fibrillæ being granular throughout, though the striation was yet perfectly distinct. There was no degeneration of the voluntary muscles. Portions were examined from the pectoral and rectus muscles.

PHILADELPHIA COUNTY MEDICAL SOCIETY.

A CONVERSATIONAL meeting was held February 25, 1874, at 8 o'clock P.M.

The PRESIDENT, DR. W. L. ATLEE, in the chair.

Dr. W. B. ATKINSON remarked that he had been recently treating a large number of cases of measles, and had also encountered a few cases of scarlet fever. In this connection, he would call the attention of the members to the use of digitalis. He had been employing an infusion of a drachm of the powder to twelve tablespoonfuls of boiling water; dose, a teaspoonful every two or three hours, according to the age of the patient. He hoped the members would try it and report their results. He had never seen any of the so-called cumulative effects of this remedy. He had used it in this way for many years, and always with markedly good results in twenty-four to thirty-six hours. He had previously employed the various modes of treatment suggested from time to time, but had never experienced so much satisfaction from any other remedial means.

While in the midst of an epidemic of scarlet fever many years ago, he had employed the chlorine-mixture, but was much depressed by his want of success. The late Dr. L. P. Gebhard suggested this remedy, and in this form; he at once put it into practice, and was pleased with the rapid amelioration of the symptoms.

Dr. BUCK said he was in the habit of using liquor ammon. acetat. and neutral mixture aa ʒi , with a drachm of tincture of digitalis, a teaspoonful every two or three hours.

Dr. W. L. ATLEE said that he was very much pleased with the remarks of Dr. Atkinson respecting the use of digitalis, as it confirmed his own experience. He had for many years been in the habit of using it in acute diseases, and in all cases of irritability of the heart. He preferred it to veratrum viride, as it is less liable to irritate the stomach, although he sometimes aids its action by administering small doses of the latter medicine at the same time. He had never seen an instance of its cumulative action.

Dr. WELCH had recently met with a few cases of measles. He had quite lately treated three cases in the Municipal Hospital, which had been sent there as cases of smallpox. This mistake occurred in some twenty-five instances during the late epidemic. In regard to the treatment of scarlatina, he said that he had frequently heard the late Dr. Gebhard speak in very sanguine terms of the good results obtained by the use of digitalis. This always seemed to him very much like treating a single symptom of the disease, the rapidity of the heart's action. So far as this particular symptom is concerned he thought digitalis might be of service, but did not think it possessed any antidotal power over the poison of scarlatina.

Dr. ATKINSON in reply said that he had come to regard digitalis as possessing some peculiar antidotal effect upon the poison of scarlatina. For this reason he preferred the powdered leaves in infusion. Of course he employed tonics, when demanded for the after-treatment. He uses this remedy in full doses until the pulse has come down to its normal rate; and then he reduces the dose or lengthens the interval, so as to keep the system under its influence.

Dr. ATLEE asked Dr. Welch whether an eruption resembling measles did not sometimes precede the appearance of smallpox.

Dr. WELCH in answer said the eruption of smallpox is frequently preceded by an eruption closely resembling measles. This usually fades out when the true eruption appears. Its presence is so frequently observed that it has received the name *roseola variolosa*.

Dr. L. TURNBULL then read a paper on Tinnitus Aurium.

Dr. KEYSER asked Dr. Turnbull if he never treats the impaction of the Eustachian tube by syringing it out through a double catheter.

Dr. COLLINS remarked that he had often treated tinnitus, and had often failed. The success of treatment depends upon finding out the cause. In one case of Graves's disease the patient suffered horrible tinnitus. When the goitre subsided and other symptoms abated, the tinnitus ceased. In the case of a young lady suffering from obstruction of the Eustachian tube, by the use of the syringe and Eustachian catheter her hearing was improved. At first she could only hear high-toned musical sounds. He could not explain the signification of the high tones. He had found trouble in the use of double catheters.

Dr. TURNBULL replied to Dr. Keyser that, under the ninth mode of treatment, he had recommended in his paper a trial of the injection of the Eustachian tube by the double catheter, and in his work on the ear he had figured and described the form. In his hands the double catheter was apt to become obstructed, by its fitting too close into the narrow part of the tube, also by the particles of hardened mucus and thick secretion. He preferred a paracentesis of the membrana tympani, and injecting the middle ear with a syringe which has a close-fitting nozzle covered with elastic tubing, into the external meatus, charged with a warm alkaline solution, and afterwards one of stimulating or alternative, such as nitrate of silver, etc., being careful to hold the hand well elevated, so as to avoid the fluid entering the frontal sinus. Another plan is to introduce the Eustachian catheter by the nostril, and, by means of a hand air-bag, blowing the secretion through the perforation.

In reply to Dr. Collins, he said that high tones always give trouble, and yet they were heard even in so simple a disease as "otitis media catarrhalis," or when we have a very concave membrana tympani, owing to the affection of the middle ear causing pressure and hyperæmia of the cochlea. For we consider the cochlea a sort of micrometer of sound. We have also in disease of the middle ear a symptom known as double-hearing, the last tone being repeated or echoed from the same cause. In some recent experiments, Dr. Turnbull has found that but few, and those young persons, who are considered to have good ears, and were also musicians, failed to reach forty thousand vibrations of König's rods (these rods were made with great care for use in diagnosis of diseases of the ear, under the supervision of his friend Dr. C. J. Blake, of Boston, Lecturer on Otology in Harvard University).

GLEANINGS FROM OUR EXCHANGES.

TRANSFUSION WITH LAMB'S BLOOD.—In one of the last sittings of the Medico-Physical Society of Dresden a report was given of sixteen cases of transfusion with lamb blood. Six of them, related by Dr. Oehme, have been conducted at the City Hospital; the others in the private practice of several physicians, Drs. Stetzner, Hirschfeld, and Bischoff. In most of these cases the operation was made on account of tuberculosis pulmonum, in one case frequent hemorrhage of the stomach, in another there were indications of puerperal disease. The phthisical patients selected for transfusion were mostly those in whom the affection of the lungs was only in the first stage of development, while the general symptoms—anæmia, sleeplessness, and deficient appetite—were more prominent. The quantity of blood injected varied from sixty to one hundred and fifty

grammes; the apparatus was constructed accurately as Gesellius uses it for this operation. The first symptoms that appeared after the injection of the lamb blood were very striking, sometimes even alarming. The temperature rose almost immediately to 40° Cels., frequently even to 41° and 42°. Intense dyspnoea, shivering, vomiting, and convulsions were observed in a great majority of the patients. All these symptoms, however, disappeared almost as suddenly as they had come forth, and the patients were able to walk back to their wards or homes. A remarkable symptom which ensued in nearly all cases within the next day or two after the operation was hæmaturia. This phenomenon has been explained by the admirers of transfusion as a consequence of destruction of human blood-corpuscles; but it seems much more natural to suppose that the blood-corpuscles of the lamb were destroyed in the serum of the human blood, just as it has been proved by experiment that the blood-corpuscles of the dog are entirely dissolved in the serum of human blood.

The effect of the operation was almost nothing. Regarding the phthisical patients, neither sleep nor appetite, nor any local symptom, showed the slightest alteration; the weight of their bodies within the first five or six weeks after the injection of blood decreased in the same proportion as before; the same result was observed in all the other cases. One patient (puerperal disease) died two days after the operation, but the autopsy afforded no reason to believe that the fatal end was due to the therapeutic measure.

It seems, therefore, that the wonderful tales related by Gesellius are not quite trustworthy, and that, if transfusion should be necessary as *ultimum refugium*, nothing but human blood ought to be used for the purpose.—*London Lancet*.

OPERATIVE PERFORATION OF THE MEMBRANA TYMPANI.—M. Bonnafont, an eminent aurist of Paris, read on the 26th of May last, before the Academy of Medicine, a paper on this operation. It appears that he has had a delicate trocar and canula constructed; and when the former is withdrawn the latter remains in the tympanum, held by little wings or hooks which mechanically spring up on the withdrawal of the trocar. The canula thus remains in the ear as the style in the lachrymal canal. With very sensitive people, M. Bonnafont first deadens feeling in the membrane by means of the ether spray, and thus prevents such movements of the patient as might render the operation unsafe. The case mentioned in the communication was successful, the hearing having immediately considerably improved.—*London Lancet*.

TREATMENT OF ZONA BY COLLODION AND MORPHIA.—Dr. Bourdon, Hôpital la Charité, after having tried a great many local means for treating the above disease and checking the intense pain, has definitively adopted the following plan: Without opening the vesicles, he paints all the diseased surface with a combination of collodion and morphia,—collodion one ounce, morphia eight grains. The mixture must be put on pretty thickly. The pain ceases from the second day, and at the end of seven or eight days, when the layer of collodion is removed, all the vesicles have disappeared, and there remains only a slight local redness.—*London Lancet*.

SILICATE OF SODA IN GONORRHOEA.—At the Roosevelt Hospital, injections of the silicate of soda have been recently employed in the treatment of gonorrhœa, in both acute and chronic stages:

R Silicate of soda, 20 grains;
Water, 8 ounces.—M.

The injections are given three times a day, with satisfactory results. No other treatment is combined with it.—*The Medical Record*.

SATURDAY, JULY 4, 1874.

ORIGINAL COMMUNICATIONS.

THE OPERATIVE TREATMENT OF PLEURAL EFFUSIONS.

Read before the Philadelphia County Medical Society, March 25, 1874,

BY WILLIAM PEPPER, M.D.,

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IN announcing that I should this evening present a few remarks upon the subject of pleural effusions, I have felt that it would be desirable to pass over the somewhat theoretical questions which may be raised about the diagnosis of these effusions, and to limit my remarks to the more practical and interesting point of their treatment. It is necessary, however, that we should, before entering upon that discussion, determine clearly the extent of our inquiry, and decide upon the precise meaning of several terms which it will be essential frequently to employ. The term "pleural effusion" is evidently the most general one which can be used to denote fluid accumulations in the pleural sac. Nearly all of the other terms which are applied have some special meaning which would properly restrict their application to some single class or variety of these effusions, and undoubtedly it was the original intention of those who introduced these terms that they should convey this specific and limited meaning; but with the course of years, and the varying phases of opinion as to these affections, more and more laxity has crept into our mode of employing them, and in some instances we find them used by authors of eminence with meanings the most diverse.

Among these terms, the most common are the following, which I shall, throughout this discussion, employ with the signification now attached to each:

Pleuritic effusions,—the general term for collections due to inflammation of the pleura.

Hydrothorax,—indicating a serous effusion due to subacute inflammation, to venous stasis, or to changes in the crasis of the blood.

Pyothorax, or empyema,—indicating an effusion which is composed of pus, either pure or mixed with varying degrees of sero-albuminous fluid, and which is, as a rule, connected either with very intense acute inflammation, or more frequently with inflammation occurring in cachectic states of the constitution; and,

Hæmothorax,—indicating an effusion composed in large part of blood. This term is inapplicable to those serous effusions which are merely tinged, sometimes very deeply, with hæmatin, or which actually contain a very minute proportion of blood.

Having thus defined the terms which are used to designate these effusions, it is evident that the treatment adapted to their cure must vary greatly in the different forms. The general methods of treatment applicable are internal and external: among the former may be mentioned dietetic and medicinal means, while the latter include local applications and operative procedures. It will, perhaps,

be most convenient to discuss these separately, with special reference to their practical applications. It will not be thought surprising that I should first call attention to the operative treatment of pleural effusions, in these days when a recent author* speaks in the following words: "Thoracentesis is no longer an operation: it is a prick of a needle, which obviates at once pain and danger." It is quite true, indeed, that the idea of removing large pleural effusions by paracentesis is not a new one. The operation was clearly recognized, and rules for its performance, not very different from those adopted by some modern operators, were laid down, in the writings of Hippocrates. During the seventeenth century, the operation, which had previously been resorted to but rarely, gained great popularity. Scultetus introduced the use of the syringe to withdraw, by aspiration, the portion of the effusion which gravitates below the external opening; and numerous important treatises were written upon the subject. It is, indeed, difficult to conceive how it should have been otherwise, when so many cases were observed where nature effected a cure of long-standing pyothorax by an external opening, and when, in post-mortem examinations, it must have been frequently noticed that the fatal accumulation of serum or pus was confined only by the thin intercostal tissues, which might readily have been punctured. Yet it is to be borne in mind that, until the introduction of physical diagnosis had rendered the detection of pleural effusions as certain and easy as it now is, physicians must have had recourse to the operation with much hesitation and uncertainty.

But few distinct clinical histories remain to us from the earlier days of paracentesis; but doubtless, to judge from the difficulty which even now attends the diagnosis in some cases of pleural effusion, our bold forefathers must have made many a "dry tap."

The more recent history of the operation is somewhat curious. Despite the many instances in which it was known to have been successfully employed, despite the improvements in the mode of operating, and the vast improvement in our power of determining the exact location and extent of the effusion, paracentesis continued to be regarded as a daring operation, to be performed only under conditions of urgent danger. It is true, when Laennec announced his immortal discovery, he did not fail to perceive the bearing which physical diagnosis had upon the operation under discussion, and he asserts that "paracentesis will become much more common and much more useful in proportion to the diffusion of the employment of mediate auscultation." That this prediction was not more speedily verified is to be explained by the fact that there was still wanting a clear analysis of the clinical symptoms which furnish the chief indications for the operation, as well as the sole guide in the prognosis of its results.

The great credit which is due to Trousseau in connection with paracentesis is, then, undoubtedly

* Dieulafoy, *Pneumatic Aspiration*, London, 1873, p. 269.

this, that in 1843 he for the first time gave a clear and impressive account of the precise indications which call for the operation, while at the same time he simplified the operative procedure, and, by his great success in repeated instances, confirmed his precepts by the most extended practice. Becker, Schuh, and Skoda had, a few years previously, published valuable memoirs, which anticipated most of Trousseau's conclusions; but it was reserved for this latter teacher, by his firmness and his eloquent advocacy and brilliantly successful employment of paracentesis, to bring the operation into the high favor which it has since enjoyed. On the continent of Europe, its discussion has been ever since "the order of the day;" and in England it has been frequently advocated and performed.

In America, despite the valuable memoirs of Bowditch, published over twenty years ago, the operation has apparently never been so popular and generally practised as abroad. It may, therefore, not be deemed inappropriate if I give a brief sketch of the operation as it is performed by different operators, and as I have myself frequently employed it. And in speaking of them I shall allude—

1. To the instrument employed.
2. To the point of puncture.
3. To the after-treatment.
4. To the indications for operation.

The first method to which I shall allude may be called that of Trousseau, although the chief peculiarity, the valve in the canula, was the introduction of Reybard (*Gaz. Méd.*, January, 1841). As described in his work on Clinical Medicine (Syd. Soc. Trans., vol. iii. p. 270), the apparatus consists merely of a bistoury, with which an incision is made through the skin at the point to be punctured, and a common trocar, the lips of which are surrounded with gold-beater's skin which is softened by being wetted. When gold-beater's skin cannot be obtained, a piece of the intestine of a fowl, rabbit, or cat, or a bit of bladder, will serve the purpose of forming a valve which will allow the fluid to flow out during expiration, whilst during inspiration it rests in exact apposition to the expansion of the canula and prevents the entrance of air to the chest.

A modification of this method, which I have employed in many cases with entire success, is as follows. A piece of thin india-rubber tubing is attached to the canula, and the trocar is passed through the tubing before entering the canula. The free end of the tubing is placed in a vessel containing a little water. After the puncture has been made, the stylet is withdrawn, the minute hole in the elastic tubing instantly closes, and the fluid escapes into the vessel, the water in which effectually prevents any return of air during the interruption to the flow of the fluid.

As illustrations of the successful performance of this simple operation, the following cases may be cited:

Case I.—Hydrothorax with ascites, following cirrhosis of the liver, and (probably) adherent pericardium; paracentesis; recovery.

W. E., æt. 71, was admitted into the Philadelphia

Hospital on March 25, 1873. He had enjoyed general good health. In 1845 he had rheumatism, with affection of the heart, and since then had more or less palpitation. For the previous six months he had been much troubled with dyspepsia, flatulence, irregular action of the bowels, and occasional nausea; and, within the past two months, ascites had appeared.

On March 20 he had a profuse hæmatemesis, followed by bloody stools, which caused a dangerous state of exhaustion. On admission, he was still extremely prostrate and anæmic, and regained strength but slowly. There was no return of hemorrhage, but the effusion in the abdominal cavity increased, and signs of hydrothorax of the right side appeared. He was placed upon the use of digitalis, squill, and nitrate of potassium, and at first the pleural effusion diminished somewhat, but again increased, and became associated with so much gastric irritability and diarrhœa as to render internal medication impossible. There also occurred now from time to time spells of extreme dyspnœa, with so much disturbance of the heart's action as to be alarming.

The physical signs were as follows. The right side of the thorax was enlarged, with some bulging of the intercostal spaces. There was complete dullness, continuous below with the area of liver-dullness, and extending up to the second rib, above which there was tympanitic resonance. Over the area of dullness the vesicular murmur was absent, and no breathing-sounds were heard, but distant bronchial breathing. Vocal resonance and fremitus were also almost annulled. By careful percussion, distinct fluctuation could be detected in the sixth interspace. Over the apex there was rude respiration. The respiratory movements of the right side were very slight. There were no signs of disease on the left side. The apex-beat of the heart was greatly influenced by the respiration, descending during inspiration to the sixth interspace, a full inch to the left of the nipple-line, and rising during expiration to the fourth interspace, just within the left nipple. There was also distinct retraction of the nipple and soft tissues surrounding it, attending the contractions of the heart. There was neither præcordial thrill nor any friction-sounds or valvular murmurs heard there. The cardiac sounds were feeble, irregular, and often reduplicated.

On May 24, 1873, he had an unusually severe paroxysm of dyspnœa, with lividity, coldness of extremities, feeble, fluttering pulse, gasping respiration, and great prostration; and, on the day following, one hundred and sixteen fluidounces of clear, straw-colored serum were drawn off by a puncture in the sixth interspace, at the line of the anterior border of the axilla. During the early part of the operation the fluid was allowed to flow through an india-rubber tube attached to the canula; the last portion of the effusions was removed by a Bowditch syringe. The patient became so weak as to render it necessary to abandon the operation before all the fluid was withdrawn. Adhesive strips were tightly applied around the right side of the chest. There was an immediate return of percussion-resonance down to the fifth interspace, with vesicular murmur and crackling sounds (expansion râles, mixed with friction-sounds).

The following observations of his pulse and temperature were made before and after the operation:

May	24,	8	o'clock P.M.	Temp.	100 $\frac{3}{4}$ °;	Pulse	97.
	25,	12	"	M.	98 $\frac{1}{2}$ °;	"	66.
"	"	4	"	P.M.	"	99 $\frac{1}{2}$ °;	" 64.
"	"	8	"	P.M.	"	99 $\frac{1}{2}$ °;	" 80.
"	26,	6	"	A.M.	"	98°;	" 73.
"	"	12	"	M.	"	99°;	" 97.
"	"	8	"	P.M.	"	99 $\frac{1}{2}$ °;	" 98.

Since that date he has continued under observation. There has been no return of hydrothorax. The fluid which remained in the pleura, as well as the ascites,

was gradually removed after the operation, under the use of digitalis, iodide and acetate of potassium, and mild laxatives. He is at the present time enjoying fair health for a man of his age. There is still slight dullness at the base of the right chest, and a few friction-sounds are at times heard over the antero-lateral region.

Case II.—Hydrothorax, from chronic subacute pleurisy; fatty degeneration of the heart, and incipient cirrhosis of the kidneys; paracentesis, followed by great relief; return of pleurisy; death from ulceration of colon.

J. L., æt. 72, a huckster by occupation, and much exposed to inclement weather, was first admitted to the Philadelphia Hospital in 1863, with acute rheumatism, and was discharged cured in eight weeks. In 1866 he was admitted to the out-ward department, and remained there, in fair health, though somewhat troubled with weakness and occasional palpitation of the heart. In the winter of 1871–2 he contracted a severe cold from sitting in the draught, and soon afterwards began to complain of increased weakness, feverishness at night, pain in the right side, shortness of breath, frequent, dry cough, and soon afterwards of swelling of the feet and legs. These symptoms increased, and he was readmitted to the hospital on April 26, 1872, with œdema and ascites, and marked dyspnœa, and palpitation and irregular action of the heart. Upon physical examination, there was flatness upon percussion, with great increase in sense of resistance from the third intercostal space downwards upon the right side. The level of dullness varied markedly with alterations in the position of his body. There was decided enlargement of the right side of the chest, with bulging of the lower intercostal space. The respiratory movements were greatly impaired, and vesicular murmur was absent over the area of dullness. There was, however, a transmitted bronchial breathing-sound over the entire lung. The apex-beat of the heart was pushed considerably to the left. He was placed upon the use of tinct. digitalis, gr. xij to xv, with spts. juniperi comp., f3ss thrice daily; and later there was added to this, potassii acetatis, gr. xij, and potassii iodidi, gr. iii, thrice daily. Tincture of iodine was daily painted over the seat of effusion.

His digestion was greatly disturbed, and the above treatment appeared to diminish his power of taking food, while the symptoms of disturbance of respiration and circulation became so urgent that, on June 3, a fine trocar was introduced immediately above the eighth rib, in a line with the anterior border of the axilla, and one hundred fluidounces of clear serum were withdrawn through an india-rubber tube attached to the canula, the free end being carried below the surface of water. No suction-pump was used. The operation was productive of immediate and great relief, and was followed by no rise of temperature, or any unfavorable symptom. The apex-beat of the heart returned to its normal position. The lung expanded; the transmitted bronchial breathing disappeared, and vesicular murmur became audible over the upper and front portions of the chest, while dullness on percussion and feeble bronchial breathing persisted in the most dependent posterior parts of the chest.

There was subsequently so much improvement that he left the hospital again, though with evidences of pleural thickening and with some effusion in the left thorax.

He came under observation again in October, 1873, more than a year afterwards. He was then quite weak, with poor appetite and digestion, and constant tendency to diarrhœa. Heart's action irregular and feeble; circulation sluggish, and œdema of feet appearing during day and disappearing at night. There was no valvular murmur.

The following notes of physical signs were made:

Right chest moved much less in infra-clavicular and mammary regions than the left side. Below the lower

part of the mammary region down to the lower border of the ribs there is a sinking on each inspiration quite marked when compared with the left side. Vocal fremitus increased; from the sixth rib to the lower border of the thorax there is a marked depression anteriorly; posteriorly, the conformation of the two sides is alike. Percussion anteriorly is resonant from the clavicle to the fifth rib, below this it becomes flat; posteriorly it is resonant above and for a short distance below the spine of the scapula, below this it is flat. Auscultation, posteriorly, at the upper part of the chest reveals bronchial breathing which becomes fainter as the lower part of the lung is reached, and low down can be just heard.

Anteriorly, bronchial breathing can be heard as low down as the fifth rib; below this there is with each inspiration a creaking sound; none on expiration. Expiratory murmur can be heard; vocal resonance increased on this side.

Left chest, very resonant anteriorly and posteriorly; respiratory murmur increased over whole of lung; chest just below the clavicle is slightly fuller than on the other side. In inspiration the whole of this side seems to be lifted upward; movements much more free than on the right side. He has no cough, but some dyspnœa, though not enough to prevent him sleeping on his back.

There is well-marked arcus senilis around each eye, and vision is impaired.

Liver-dullness does not extend below the border of the ribs.

Urine passed very freely; has to get up several times during each night to pass it; quantity large. It is normal in color, and contains no albumen; sp. gr. 1008.

His treatment consists of digitalis, tincture of chloride of iron, and quinine, with application of iodine to the chest.

January 6, 1874.—Since the last note he has been gradually sinking, especially during the last three weeks; he has lost flesh rapidly; there has been much diarrhœa, sickness of stomach, and vomiting. The stools have been very watery, varying from a light to a dark color, and sometimes numbering as many as fifteen to twenty in the twenty-four hours. The matters vomited have consisted of food mixed with a yellow liquid, and have at no time contained any blood. His piles, which he has had for a number of years, have been very troublesome lately. His pulse has been very irregular and intermittent, and so very feeble as to be scarcely perceptible at the wrist. Every means was taken to keep up his strength, and to stop the diarrhœa and vomiting; but on January 6, at 8 o'clock A.M., he died.

Autopsy made four hours after death. There was a marked depression on the antero-lateral part of the right chest, at the seventh, eighth, and ninth ribs, over a space about six inches wide and four inches long. The point of puncture was in this area. The scar left by the trocar in the skin was barely visible, and there were no adhesions between the skin and intercostal tissues. Upon the costal pleura there was a minute opening, one-sixth of an inch in diameter, still visible. On opening the thorax, the right lung was found to be compressed, and the pleura tightly adherent. The adhesions were firm all over the pleural surface, but most so at the lower part, where they were very dense, and about half an inch thick. The attachments were so firm that the lungs were with difficulty removed. The adhesions were thickest at the position of the depression of the ribs, above stated; just behind this point there was a small cavity, containing serous liquid, circumscribed by the thickened adherent pleura. The right lung was dark and congested, but still permeable to air. The left lung was normal, but somewhat congested. At the apex of this lung there were some moderately firm pleuritic adhesions; there were none over the rest of the lung.

Heart flabby; much fat on the outside; tissue soft and fatty; no valvular lesion, except some slight thickening of the edges of the mitral valve; heart did not retain its shape when placed on the table; no excess of liquid in the pericardium.

Liver fatty; spleen small; kidneys small and contracted. Extensive ulceration of the large intestine, most marked at the sigmoid flexure.

I have already alluded to the fact that so long ago as the time of Scultetus the use of a syringe was recommended to exhaust the portion of the effusion which was below the level of the external opening. Laennec advised the use of a cupping-glass and exhausting-syringe, with the view of draining off the last remains of fluid and of facilitating the expansion of the lung. But more recently, greatly improved suction-pumps or aspirators have been devised. Among these, the apparatus devised by Bowditch deserves prominent mention. And still more recently, Dieulafoy has modified the syringe by introducing a stopcock between the nozzle and the chamber, so that the latter may be exhausted, and then, after the point of the trocar is buried beneath the skin, the vacuum may be brought into connection with the cavity of the needle and the point be endowed with a spontaneous power of suction.

He has also devised a modification by which a vacuum is created in a graduated jar, and the cavity of the needle brought into connection with this, so that the amount of fluid withdrawn can be directly observed. This latter form has the disadvantage that in the case of large effusions it is necessary from time to time to detach the receiver (which contains about twenty fluidounces), empty it, renew the vacuum, and re-attach it. Where the collection of fluid to be withdrawn is small, and particularly if it be also offensive, this instrument enables you to remove it without exposing it to the atmosphere at all.

In attempting to estimate the relative advantages of these various methods, I would not be understood as disparaging the merits of any, whilst at the same time I would raise my voice against the unquestioning, unmeasured laudation which has been bestowed in many quarters upon Dieulafoy's apparatus. The sole object which is to be accomplished by paracentesis is the withdrawal of the effusion without permitting the entrance of air. In considering which of the above methods best secures this purpose, it is to be first observed that they all provide effectually against the possibility of the entrance of air during the withdrawal of the fluid. Let us ask, in the next place, by what forces the removal of the fluid is to be accomplished. In employing either of the two first modes, where a simple puncture with a guarded canula is made, there is no external power whatever employed. The forces which expel the fluid are—1, gravity, which leads so much of the effusion as is above the level of the external opening to escape, in seeking its level; 2, the tendency of the chest-wall, which has been greatly stretched, and of the adjoining viscera, which have been displaced, to return to their normal limits, by expelling a portion of the effusion; and 3, the centrifugal pressure of the expanding lung.

It is further evident that the first force, that of gravity, will be able to operate directly in propor-

tion to the activity of the two latter elements, since, if the lung be entirely non-expansive, the chest-wall rigid and inelastic, and the dislocated viscera fixed in their morbid position, there will be little or no escape of fluid. In other words, the rapidity and extent of the withdrawal of the effusion are measured by the promptitude and degree of the return of the viscera to their normal condition. It will therefore always be observed that the fluid, which at first flows in a steady stream, soon begins to escape by jets corresponding to the movements of respiration.

On the other hand, in the employment of either of the two later methods—Bowditch's syringe, or Dieulafoy's aspirator—we bring to bear an additional power,—that of the suction of a vacuum. In regard to the aspirator, it must be remembered that it possesses one virtue peculiar to itself, and which gives it a high diagnostic value. As there is constantly the full suction-power of the vacuum at the end of the needle as it is pushed through the tissues, it follows that the instant the fluid is reached it will be seen to enter the chamber of the syringe. Whereas, it is quite possible that, in case of a comparatively thin layer of fluid included between pleuræ thickened by plastic deposits, the trocar of a Bowditch's syringe or an exploring-needle might be passed through the liquid stratum and have its point imbedded in the thickened pulmonary pleura, and thus seriously mislead the operator. But apart from this special diagnostic value, and of its great importance in some cases I am well aware, Dieulafoy's aspirator has no advantage over Bowditch's syringe, while it has the disadvantage that, as the barrel of the syringe is small, and the piston necessarily works very tightly, the evacuation of a large collection of fluid is both tedious and fatiguing. Both instruments are, however, alike in this, that when they are used, instead of the fluid being expelled by the forces we have already considered, it is sucked out by a force which varies with the perfection of the vacuum created in the syringe, but which is in all cases quite considerable. When, therefore, all the conditions exist which render it impossible for the parts to return quickly to their normal position,—when the lung is tightly bound down, and the chest-wall rigid,—it is quite possible, despite Dieulafoy's assertion to the contrary, that an injurious traction may be exerted upon the lung by the forced withdrawal of fluid from the pleural sac.

Case III.—Double hydrothorax, associated with cancer of mamma and pleura; paracentesis thrice performed with marked relief; severe pain during use of pneumatic aspiration.

M. M., æt. 35 years, Irish, of healthy family history, was admitted to the Philadelphia Hospital on January 17, 1874. Five years ago she had a fall, striking her right mamma, and soon afterwards a swelling appeared, which ultimately proved to be a cancerous growth. The breast was removed in June, 1869; in June, 1870, the disease recurred in the cicatrix, and in August she was again operated on. In February, 1871, a third operation was performed. The general health remained fair until the spring of 1872, when dyspnoea and great weakness appeared, with dry, paroxysmal cough. There was also frequent vomiting. These symptoms

persisted until her admission, although lately vomiting has been less frequent and dyspnœa not so urgent. On admission she was anæmic and emaciated. There was a slight cachectic appearance; she also had occasional night-sweats. The right arm was weak and œdematous. There were cancerous nodules in the scar in the right mammary region; and the left mamma was much atrophied, hard, and nodular. The pulse was rather small,—100; the respirations 21. On physical examination the respiratory movements, especially the expansion of the chest, were greatly impaired; the chief movement being one of elevation and depression. At the right apex there was a high-pitched sub-tympanic note, but below the level of the second rib anteriorly there was, in the erect position, complete flatness. This was continuous around to the back at the same level. There was greatly increased sense of resistance over this flat area. In the recumbent position, resonance on percussion extended down to the third rib. The vesicular murmur was heard at the right apex, but was entirely absent below the third rib anteriorly; posteriorly it could be heard nearly down to the angle of the scapula. Vocal fremitus was almost absent on the area of flatness. Vocal resonance was audible over the whole of the back; along the vertebral gutter out to the angle of the ribs there was ægophony, while farther out there was quavering, feeble bronchophony. There was no downward displacement of the liver. The apex-beat of the heart was under the left nipple. On the left side there was complete dullness below the fifth rib.

On Friday, February 26, a No. 2 aspirator-needle was introduced through the sixth right interspace on a line with the middle of the axilla. A clear, reddish-yellow, serous fluid escaped freely through the needle under the use of the aspirator; at first the withdrawal of the fluid was attended only by a slight hacking cough, but after three pints had been withdrawn the patient began to complain of great pain under the sternum, with a sense of dragging there; this was increased on respiration, and grew worse with each additional use of the pump. The entire amount of fluid withdrawn was Oijss (56 f℥), when the operation had to be discontinued, owing to the suffering it caused. The pulse and breathing were accelerated immediately after the operation, owing to pain and excitement. The pain continued severe for ten minutes. The following day the patient felt much relieved; the breathing was easier, though there was still but little motion of the right side; there was still flatness up to the second rib over an area extending about one and a half inches to the right of the sternum; on the line of the nipple there was resonance down to the third rib anteriorly, and down to below the angle of the scapula posteriorly. Respiratory murmur was feeble below the third rib anteriorly, and below the angle of the scapula posteriorly; above these levels it was clear and strong, mixed with coarse creaking and dragging friction-sounds, which were heard most distinctly over the scapular region. There was distant, feeble respiratory murmur with prolonged expiration heard almost to the base of the thorax. The condition of the left side was unchanged. There had been no elevation of temperature.

On March 15, although the patient's condition continued relieved, the evidences of effusion in the right thorax were so positive that the same aspirator-needle was again introduced through the same spot. This time the pump was not used, but an india-rubber tubing was attached to the needle, so that the fluid might escape merely by gravity and the pressure of the expanding lung. The same character of fluid escaped immediately through the needle, but so slowly that it became evident that the lung was unable to expand. It flowed at the rate of about f℥i per minute, and, when f℥xvi to xx had escaped, ceased entirely. The patient experienced

none of the peculiar dragging pain which had attended the first tapping, and expressed herself as somewhat relieved. The operation was not followed by a single disagreeable symptom, and there has since been no increase of effusion on that side.

In the early part of May the effusion in the left pleural cavity had increased so greatly as to demand operative relief. Paracentesis was accordingly performed in the same manner as upon the right side (Dieulafoy's aspirator being employed), and about seventy fluidounces of clear serum were withdrawn. The operation was attended with but little pain, and has been followed by no demonstrable reaccumulation of fluid, although the evidences of intra-thoracic cancerous disease are developing.

It must be further asked, in connection with this point, how much advantage attaches to the entire withdrawal of the effusion. It has been held by some that it is undesirable to do so, but I confess to being unable to perceive any good reason for fearing to do it in cases where it is evident, by the return of pulmonary resonance and the development of the vesicular murmur, that the lung is expanding freely to occupy the place of the effusion. In such cases it is undoubtedly possible to withdraw the accumulation by the simple canula, as described. In other instances, where the effusion is serous, but yet the lung is incapable of fully expanding by the mere pressure of the atmospheric air entering its tissue, it may be of service to supplement this by the force of aspiration. But I have not observed in such cases any disadvantage from allowing a portion of the effusion to remain, since it has often been possible, after the excessive distention was removed, to secure the absorption of the remainder as the lung gradually expanded.

In fine, the result of my own experience has been that the greatest value of the "aspirator, with the previous vacuum," in cases of pleural effusion, is a diagnostic one; that in cases of large effusions, when the lung is free to expand, the effusion can be easily, safely, and successfully withdrawn by a simple guarded canula; that in cases where the inability of the lung to expand prevents free escape of the fluid through the canula, it is desirable to employ an exhausting syringe, unless its use is attended by such severe pain as to indicate excessive tension upon the pulmonary tissues or upon organized adhesions.

(To be continued.)

CASE OF OVARALGIA.

BY W. S. MAXWELL, M.D.

MRS. B., aged 32, married, mother of three children, had been suffering from metrorrhagia for eight weeks, the result of an abortion, for which I was treating her.

September 17, 1873, I was called to see her in great haste. Found her suffering intensely with pain in the region of both ovaries, with shooting pains extending to the perineum, back, and shoulder. The pains were of an intermittent character; there was tenderness upon pressure over both ovaries, nausea, constipated bowels, tongue clean, no fever, temperature normal.

Mrs. B. was subject to facial neuralgia, and was out the day before in the rain. Taking all things into consideration, I concluded that she was suffering from neuralgia of the ovaries.

Treatment.—Morphia in one-quarter grain doses was injected hypodermically every hour until a grain had been given, before relief was obtained. The relief was transient; as soon as the effects of the morphia wore off, she was as bad as ever. An enema was given and repeated several times, but there was no movement from the bowels. Nausea was finally quieted by all-spice tea.

Sept. 18.—No better. Continued the morphia hypodermically. Ordered

R Quiniae sulphas, gr. xxiv;

Morphiæ, gr. i.

Ft. pil. xii.

Sig.—Two pills every four hours.

Sept. 19.—Much better; bowels were moved; she slept several hours.

Sept. 20.—Better; some appetite.

Sept. 21.—Worse than she had been; no change in the symptoms. Used morphia hypodermically to give relief. Ordered

R Quiniae sulph., ðiv;

Morphiæ, gr. iv.

Ft. pil. xl.

Sig.—Two pills every four hours.

Sept. 22.—Better; continued to improve.

Oct. 1.—Able to be up; the metrorrhagia was cured.

June 3, 1874.—At this time Mrs. B. is enjoying excellent health.

ANOMALY OF THE PHRENIC NERVE.

BY C. T. HUNTER, M.D.

IN the winter of 1873, while dissecting the lateral region of the neck of a white male subject, I found an exceedingly rare and interesting anomaly in the course and relations of the right phrenic nerve.

In tracing the nerve to its apparent origin I discovered that it arose from the anterior branches of the third and fourth cervical nerves,—the normal arrangement. In addition, however, it received a communicating branch from the axillary plexus, which branch joined the phrenic nerve at a point immediately above the subclavian vessels. The course of the phrenic nerve was almost vertically downwards from its origin along the outer edge of the scalenus anticus muscle, and when it reached the base of the neck, instead of crossing the first part of the subclavian artery and passing between the artery and the vein, as in the normal distribution, it took its course in front of the third part of the subclavian vein, and descended into the thorax behind the right internal mammary artery, thence to its normal position on the outer side of the right vena innominata and superior vena cava.

On examining the left side of the subject's neck I found the phrenic nerve in its normal position.

This irregularity in the course of the phrenic nerve I have not found recorded in any of the American or English works on anatomy or surgery: therefore I infer that it is very rare, and that the surgeon is not likely to meet with it in the deligation of the subclavian artery at the point of election—viz., the third part.

NOTES OF HOSPITAL PRACTICE.

BELLEVUE HOSPITAL.

SURGICAL CLINIC OF PROF. JAMES R. WOOD.

Reported by FRANK WOODBURY, M.D.

OPERATION FOR THE RADICAL CURE OF INGUINAL HERNIA.

GENTLEMEN,—The subject to which I will invite your attention to-day is one of more than ordinary importance. From the days of Hippocrates to the present the treatment of hernia has been the objective point to which not only the best minds of the profession have been directed, but it has also engaged the attention and furnished lucrative practice for a host of empirics, male and female.

A hernia may be defined as a protrusion of some of the contents of the abdomen through its parietes, at other than the natural outlet. I have seen the bowel prolapsed as far as the sigmoid flexure, but this is not a hernia within the limits of our definition. I will not dilate upon the varieties of hernia, but will state that, according to its location, it is called diaphragmatic, umbilical, inguinal, femoral, ischiatic, or lumbar, and may consist of bowel and omentum, forming an enterocele, or simply of omentum, constituting an epiplocele. I will postpone the complete discussion of this subject, reserving it for a didactic lecture at the college. You may judge of the extent of this affection from the fact that one person out of every thirteen that you meet is the subject of hernia; and a surgeon in large practice has these cases coming to him every day, so that it is absolutely necessary for you to understand its diagnosis and treatment. Your books speak of external and internal abdominal rings, inguinal canal, etc., but you cannot find them in the ordinary subject in the dissecting-room, because they are part of the pathological condition, and are formed by the gradual yielding of the cellular tissue before the descending bowel: its cure consists in restoring the bowel to the abdomen and obliterating the canal.

Some of the operations that have been performed for its radical cure are barbarous in the extreme. Men and women travelled about the country performing for its relief excision of the scrotum, or its strangulation by a ligature to induce sloughing, sometimes including in the ligature both testicle and scrotum of the affected side; they even bared the spermatic cord and ligated it, nerve and all; but the favorite operation was castration. It is said that Paracelsus, a notorious quack, was in the habit of feeding his dogs upon the testicles so obtained. To be sure, these operations caused suffering and frequently death, but they were not greatly improved until a comparatively recent period. The actual cautery was even recommended and employed to excite adhesive inflammation of the walls of the canal and thus cure the hernia, as it had long been employed to arrest hemorrhage. Think of thrusting a hot iron into a stump to stop bleeding from a femoral artery and smaller points of oozing after an amputation, or of pouring upon it boiling pitch or oil, and this without an anæsthetic! Yet this was done until the fifteenth century, when Ambrose Paré introduced the use of the ligature.

Although great improvements had taken place in the art of medicine, yet it was not until 1836 that the first rational operation for the radical cure of hernia was devised. Gerdy then recommended invagination of the scrotum by the surgeon's index-finger into the canal and confining it there by two points of interrupted suture, and through its anterior wall; the pouch is then washed with spirit of ammonia, to cause adhesion of the adjacent surfaces. This was a great advance, but was

still imperfect, because the internal ring being still patulous the hernia was not cured, but merely converted into an incomplete hernia or bubonocoele. To remedy this, Bonner, in 1837, recommended passing acupuncture pins through the neck of the sac, and thus obliterating it; but this plan is not so effective as that of Gerdy, which I have frequently employed, inserting into the canal a sponge saturated with liquor potassæ, spt. ammoniæ, or sol. corrosive sublimate, with good result.

The following year a man in Bonn on the Rhine, Wutzer, devised the instrument I now exhibit. It is composed essentially of three pieces,—a wooden cylinder, a curved needle, and a wooden cover which clamps upon the cylinder. The cylinder is passed into the invaginated pouch, and by means of a screw a steel needle, which is concealed near its end, is made to project through the anterior wall of the canal, and is received into a fenestra in the external blade; the instrument then remains in position at the pleasure of the surgeon. The value of this operation consists in the fact that it obliterates the canal high up and immediately in front of the internal ring, which, as you know, is half-way between the anterior superior spinous process of the ilium and the spine of the pubes. Good results may be obtained by this means; but, whatever operation you adopt, be careful not to include the gut in the embrace of the instrument, and not to cause peritonitis by inducing a too high degree of inflammation. This instrument was modified, but not altered in principle, by the addition of another needle, by an eminent man whose services in teaching we gained shortly after the war, and who was until lately in the enjoyment of a large practice in this city. I refer to the late Prof. Nott, of Mobile, who enjoyed the esteem of the entire profession, and whose recent death excites general regret.

Many other instruments have been devised. I here show you Riggs's improvement upon Armsby's needle and canula, which may be cited as the most prominent.

Other operations have been recommended, such as the procedure of Velpeau, who cut down upon the sac and injected an irritating fluid to cause adhesion. This was improved by that great man, Prof. Pancoast, of Philadelphia, who used an injection of tincture of iodine through a canula without exposing the sac, first placing a finger over the internal abdominal ring to prevent the fluid from flowing into the peritoneal cavity. This I consider about the best operation of all.

The question will be asked by your patients, "Can I be cured by an operation?" My experience upon this point is that in the majority of cases the hernia returns; and I have seen more of these cases, and performed this operation perhaps more frequently, than any other living surgeon. I do not say this boastfully, but I always endeavor to tell you the simple truth as familiarly as if you were gathered around my own fire-side. You should answer, then, that it will probably recur unless the patient continue to wear a truss.

To the case before you there is attached a point of especial interest. About seven weeks ago he came here with an irreducible hernia, incarcerated but not strangulated. In such cases, never think of subjecting your patient to the risk of an unjustifiable operation. Where the gut is strangulated, you have no choice: you are obliged to do your utmost to save the patient's life; but never operate where there is simply an incarceration, a principle which is well illustrated by the subsequent progress of this case. He applied for an operation, which he had been told was necessary. This we refused, preferring to postpone it until more urgent symptoms were present. We kept him upon his back in bed, and at the end of six weeks there was a spontaneous reduction of the hernia. This shows that ill-timed operations are injurious. I never operate upon a case of fistula in ano without first inquiring into the patient's family

history, and auscultating his chest, because where it complicates phthisis we find that nature has provided this as a sewer to drain from the blood some effete material; but if the surgeon injudiciously dries this up, he injures his patient. A fistule being exceedingly annoying and disagreeable, we are sometimes obliged to operate even in cases of phthisis; but I never do so without placing, at the same time, an issue-pea at the insertion of the deltoid, to supplement nature's drain.

To-day we propose to perform the Wutzer operation, and may make a cure, although the canal is quite large. The trouble is generally reproduced by the descent of the bowel by the side of the adhesions.

No anæsthetic is necessary. The instrument is applied as described, and held in position by a Spica bandage. This is to prevent the instrument from tearing off the insertion of the external oblique muscles, which, however, might prove advantageous in some cases, by encouraging adhesion, as an operation has been recommended by a namesake of mine, Prof. Wood, of London, in which a delicate knife is made to refresh the columns of the ring, which are then approximated by a ligature. This operation is very popular in England. We will permit the instrument to remain in position from eight to ten days.

GANGLION OF WRIST.

In this case of ganglion, I wish to show you the use of the aspirator of Dieulafoy. By this instrument we can with perfect safety evacuate a pleural effusion, or go in over the pubes to tap a distended bladder which cannot be entered by a catheter on account of enlarged prostate or impassable stricture. We can evacuate tumors and abscesses, even draw off the gas from a strangulated hernia, and assist its reduction. We can even diagnose a malignant tumor by plunging it into the growth and examining the juice by the microscope, and, if we find the cells, we can also make a prognosis.

A cystic tumor in this situation may exist in the cellular tissue, or in the theca of the tendons, or communicate with the joint, and contain synovial fluid. This tumor resembles the affection known as house-maid's knee, in which there is effusion under and around the patella, caused by inflammation of the mucous bursa in this situation from constant kneeling. This also sometimes occurs in ministers, especially after a camp-meeting.

Having evacuated this cyst of a clear, glairy fluid, the subsequent treatment will be by local pressure and passive motion.

CASES OF OVARIOTOMY.

BY WASHINGTON L. ATLEE, M.D.,

Philadelphia.

CASE 247.—Ovarian tumor mistaken for pregnancy—Both ovaries removed—Incision four inches long—Omental, intestinal, uterine, and pelvic adhesions—Death on the fourth day.

January 9 and 14, 1872, I examined Mrs. G. W. B., of this city, in consultation with Dr. W. Lemuel Atlee. She was 28 years old, had first menstruated in her eighteenth year, and had always been regular. She was married in 1864, and had never conceived. In the summer of 1869 she was quite ill for several weeks with great gastric distress, followed by considerable emaciation. The following January she noticed some fullness of the waist and abdomen, and in the spring of 1870 she had a similar attack, accompanied with excessive vomiting. The enlargement increasing, her physician was positive that she was pregnant. In July she intended to have left home, but her medical adviser forbade it, fearing that she might be confined in the cars.

He had engaged her nurse, and the baby-clothes were all made.

At the time of my visit the patient's abdomen was much larger than a pregnant woman's at full term. It was pretty uniform in shape. There was dulness on percussion everywhere, except over the right lumbar region, where it was resonant. There was some resistance to pressure over the right inguinal region, but elsewhere the abdomen was elastic. Fluctuation was distinct. She was then menstruating, and the os tincæ had a velvety feel. The uterus was central. In front of it a tumor can be felt in the superior strait of the pelvis. There was numbness of the left thigh, but no swelling of the lower extremities. She was considerably emaciated. Deep inspirations did not affect the tumor, in consequence, probably, of its large size. Contraction of the recti muscles caused an oval projection between them.

Diagnosis.—Tumor of the left ovary, consisting of one large cyst with multilocular deposits in its walls.

The operation was performed January 17, 1872, with the assistance of Drs. W. Lemuel Atlee, Burpie, Mears, Hoffman, Longshore, and Buckman. An incision four inches long was made down to the cyst. No parietal adhesions were present. The cyst was tapped, and thirty pints of transparent fluid were removed. The fluid resembled urine tinged with bile, having a dark brownish-yellow color, and was loaded with cholesterol. After emptying this large cyst, multilocular masses were felt in the abdomen. These were punctured through the wall of the large cyst, but no fluid escaped from them. They were afterwards broken up, so that the whole upper portion of the tumor could be drawn out of the abdominal cavity. The omentum was now seen to be spread over the right wall of the tumor and adherent to it, and several inches of intestine were adherent to its posterior wall, while the lower portion of the tumor was strongly adherent to the basin of the pelvis. These adhesions were overcome,—the pelvic by means of enucleation. In doing this, an additional cyst, as large as a small orange, was raised from the right side of the pelvis, and attached closely to the large tumor. This proved to be the right ovary, and in breaking up the strong adhesions its pedicle was torn across, giving rise to an arterial jet of blood, which was controlled for the time by the fingers. The large tumor was still attached to the whole posterior surface of the uterus, from which it was stripped. It was also adherent to its own pedicle throughout its whole extent, and from which it was separated. The pedicle, when detached, was four or five inches long, very vascular, and contained a hypertrophied Fallopian tube. For the present a ligature was applied to it, so as to secure all its bleeding vessels, and the tumor detached.

The adhesions were very vascular, and numerous vessels were throwing off blood. Five, altogether, were secured by ligation, two of them on the posterior face of the uterus. The clamp was substituted for the ligatures on the pedicle. The ragged, bleeding extremities of the omentum were secured in one ligature, and its stump fixed in the upper angle of the wound. The pelvis and abdomen were now carefully cleansed, and the wound closed by four sutures. The patient bore the operation well. There was some vomiting, but no flagging of the pulse.

The tumor and contents weighed thirty-five pounds. Died from exhaustion on the fourth day.

TRANSLATIONS.

THE TREATMENT OF TYPHOID FEVER BY THE EXTERNAL USE OF WATER (*Allgemeine Militär. Zeitung*).—Regimental Surgeon Lederer during the past five years has treated many cases of typhoid fever with cold water, and at a meeting of the Society of the medical officers of the garrison of Vienna in April of this year he gave the results of his experience. After calling attention to the prominent rôle played by typhoid fever among the diseases incident to military life, and noting the high rate of mortality which attended it in the late civil war, he proposed the following three queries. 1. Are the results obtained from the cold-water treatment better than those from other modes? 2. Can this treatment be advantageously carried out in military hospitals? 3. What symptoms should be regarded as indications for the use of the cold-water treatment? The extreme hydropathists would give an unqualified affirmative to the first query, for they assert that by their mode of treatment the mortality is greatly reduced. Some of them even assert that water is a specific in the treatment of this fever, and that if the patient is properly treated at an early stage the disease can be cut short. From his observations, Lederer does not look upon water as possessing this specific power, and he thinks that the trials of this treatment have not as yet been sufficiently numerous to warrant the formation of conclusions as to its value. He is convinced, however, that under this treatment the disease runs a milder course, and that some of the graver symptoms may not manifest themselves. The intense headache which is sometimes one of the initial symptoms may vanish after the first baths. So, too, the delirium which commonly appears at the end of the second week may by the use of baths be so greatly modified as to be of a very mild type, or even entirely done away with. In support of this he adduces several cases in which the rapid transition from a state of wild delirium to quiet after the use of a few baths was most marked. The influence upon the return of the appetite is also marked; the tongue becomes cleaner, and the diarrhœa is not so excessive. The influence of the bath, too, in tending to produce sleep, is most marked. Bed-sores are not so apt to occur, and convalescence is more speedy. The advantages of the cleanliness promoted by the frequent use of the bath upon the general hygiene of the ward can be readily understood. As to the methods to be employed, Lederer thinks that packing the patients in damp sheets is not suitable to military hospitals, since the frequent changes of the cloths which are required call for the services of too many nurses. He therefore does not use this method, nor the one in which the surface is sponged off, but advocates the use of the cold bath, either with or without the douche. The patient, when the temperature in the axilla is above 101.5° Fahr., is placed in the bath, and a greater or less amount of water is poured upon him as the cerebral symptoms are more or less pronounced. These applications are made from 7 A.M. until 12 at night, at intervals of three or four hours, the temperature of the bath varying from 68° to 77° Fahr., that of the douche from 54° to 60° Fahr.

In answer to the third query, as to the indications for the use of the bath, he thinks that every patient with typhoid whose axillary temperature rises to 101° or above is a fit subject for this treatment, and that the earlier the cold bath is used the better it will be borne, and the more promising are the results to be looked for. If symptoms of cerebral involvement are present, the indications are still more pressing. He thinks that more care is to be exercised in the use of the bath upon such patients as are very restless, or have marked hy-

AGREEABLE PURGATIVE.—

R Magnesiæ calcinat., ʒiiss;
Aquæ, fʒii;
Syr. orgeat (or Curaçoa), fʒss.—M.

peræsthesia of the skin, and if the first bath is not well borne in such a case it should not be repeated. If complications arise during the course of the disease, such as infiltration of the lung or peritonitis, the baths must of course be discontinued. In conclusion, then, he thinks that this mode of treatment is of advantage in many cases, that it tends to diminish the risk of injury to delirious patients, that the risk of the occurrence of bed-sores is lessened by it, and that its use tends to limit the spread of the disease. W. A.

THE TREATMENT OF ERYSIPELAS WITH HYPODERMIC INJECTIONS OF CARBOLIC ACID.—Dr. Aufrecht (*Centralblatt für die Med. Wissenschaften*), having had under his care during a short time several cases of erysipelas in aged persons, after comparatively slight injuries, all of which terminated unfavorably, was induced to try carbolic acid in the treatment of this disease. If it is true that erysipelas in traumatic cases such as these is a consequence of the entrance of organic bodies into the subcutaneous cellular tissue and their proliferation there, and if carbolic acid possesses the power of destroying these germs, or at least of rendering them innocuous, the acid must be able to prevent the spread of the disease, and thus to some extent reduce the danger. To convince himself that the hypodermic use of carbolic acid was innocuous, Aufrecht made experiments upon himself with a solution of the strength of one per cent., and found that its use was attended by no unpleasant consequences. He soon had an opportunity of proving the efficacy of this treatment upon two patients,—the first a woman, aged 56 years, with erysipelas of the fore-arm and hand, upon the latter of which was a small cut; the second was a man aged 82 years, with erysipelas of the leg, about the scar of an old ulcer which had reopened. In the first of these cases five, and in the second four, injections were made. The injections were made into the sound tissue upon the proximal side of the erysipelatous area, and the disease spread no farther in that direction. The good effect of the treatment was, however, more strikingly manifested in the diminution of the temperature and the frequency of the pulse, and in the improvement of the general condition. The erysipelatous swelling and redness soon became less, but remained noticeable for a day or two after the injections were made. In both cases convalescence went on without interruption. W. A.

HEMORRHAGE OF THE LUNGS AS A RESULT OF INJURY OF THE BRAIN.—Prof. Nothnagel, of Freiburg, states that among the characteristic alterations which follow lesions of a particular portion of the superior surface of the cerebrum of the rabbit, one of the most pronounced is hemorrhage into the lung-tissue, which is often so excessive that the entire lung is engorged with blood. Brown-Séquard observed an analogous phenomenon resulting from injury not of the convexity but of the base of the brain. By a similar manipulation, a meningitis can be caused, which, as a rule, is bilateral, and, when only upon one side, is usually seen on the uninjured hemisphere.

Nothnagel considers that it is impossible that the occurrence of this meningitis should be but a coincidence, and promises further investigation of the subject. W. A.

INFLUENCE OF THE SPLANCHNIC NERVE UPON THE MOTION OF THE INTESTINES.—S. V. Basch (*Centralblatt*) concludes from his investigations that the splanchnic nerve does not properly cause a cessation of the intestinal motions. It restrains these movements only inasmuch as it, being a vaso-motor nerve, eliminates the motor irritation from the arterial circulation.

The cessation of these movements, which is due to

carbonized blood, must also be regarded as a consequence of the irritation of the vascular nerve-centre, which often remains in operation after section of the splanchnic nerves, but is eliminated by section of the medulla oblongata. Nicotine acts in the same way—*i.e.*, after causing some motion for a short time, causes a cessation of the peristaltic motion. W. A.

TERMINATION OF NERVE-FIBRES IN JOINTS.—Krause, of Göttingen, has found that sensory nerve-fibres end in the synovial membrane of the joints of the human finger by means of characteristic terminal bodies. From one to four nerve-filaments, after numerous anastomoses, become lost in oval bodies of varying size, the largest of which, however, can be seen with the naked eye. Bodies which are entirely similar are found in some of the lower animals, but they vary somewhat in size, and may be of a round instead of an oval form. W. A.

THERAPEUTIC NOTES.

CROTON-CHLORAL IN FACIAL NEURALGIA (*The British Medical Journal*, May 23, 1874).—Dr. F. B. Lee reports the case of a lady, æt. 32, who had suffered for years from attacks of facial neuralgia, had had several teeth extracted, had been blistered behind the ears, and had tried numerous other means without avail. He prescribed croton-chloral in three-grain doses every four hours. After the third dose perfect ease was experienced, and, although three months had elapsed, there had been no return of the disease.

NITRATE OF URANIUM IN DIABETES MELLITUS.—Mr. Kennedy details (*London Lancet*, June, p. 835) a case of diabetes, in which, after failure of skim-milk and other therapeutic measures, rapid improvement took place during the administration of the nitrate of uranium. One-sixth of a grain, gradually increased to a third, was given three times a day, dissolved in water.

CHLOROFORM AS AN INGREDIENT OF INJECTIONS FOR HYDROCELE.—Dr. Lubin (*L'Union Méd. de Canada*), observing the frequent lumbar pain consequent upon the use of the ordinary injections in this affection, was led to use a formula similar to the following:

R Tinct. iodinii comp., fʒii;
Chloroformi, fʒiiss.

In a number of cases in which this mixture has been used, no pain whatever followed its injection.

TOPICAL APPLICATION IN PAINFUL DENTITION.—

R Syrup of tamarinds, ʒiiss;
Infusion of saffron, ʒii;
Honey, ʒiiss;
Tinct. (essence) of vanilla, gtt. iv.—M.

Rub gently over the gums with the finger or rag. An application of a similar character is the following:

R Saffron (powdered), 4 to 6 grs.;
Honey, 2 to 3 drachms.

Glycerin may be substituted for the honey.

SOOTHING APPLICATION IN HERPES ZOSTER.—

R Collodion, ʒi;
Morphiæ muriat., gr. viij.—M.

To be painted over the vesicles without breaking them open.

EXPULSION OF THREAD-WORMS.—The oxyuris vermicularis, or seat-worm, may be readily dislodged from its favorite habitat in the rectum by the injection of two to three ounces of ol. morrhue, repeated once or twice.

PHILADELPHIA MEDICAL TIMES.

A WEEKLY JOURNAL OF

MEDICAL AND SURGICAL SCIENCE.

The Philadelphia Medical Times is an independent journal, devoted to no ends or interests whatever but those common to all who cultivate the science of medicine. Its columns are open to all those who wish to express their views on any subject coming within its legitimate sphere.

We invite contributions, reports of cases, notes and queries, medical news, and whatever may tend to increase the value of our pages.

All communications must bear the name of the sender (whether the name is to be published or not), and should be addressed to Editor Philadelphia Medical Times, care of the Publishers.

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EDITORIAL.

EUTHANASIA.

UNDER the heading of "Whither are we Drifting?" we entered some time since an indignant protest against the suggestion or opinion of Dr. H. J. Bigelow, of Boston, that physicians should put an end to such patients as were apparently about to suffer a lingering death. We have heard of this being done in this city. We have, indeed, been told of a case in which a patient, receiving a dose of opium intended to kill, survived for two years the villany of the physician and the mortal disease. We do not know whether these things are or are not so. But we do hope that any physician who is guilty of such practice will get what he deserves, and what the law, in that it says, "whoever accelerates death causes it" (Taylor), certainly allots,—the penitentiary for manslaughter, if not the gallows for deliberate murder.

We write this, and at this time, because there has recently appeared in England an essay, entitled "Euthanasia," written by Mr. S. I. Williams, Jr., and published under the auspices of a Mrs. Crayshaw, who is said to be the wife of one of the millionaire iron and coal owners of Wales. In this publication the right or rather duty of suicide is set forth, the claim being "based on the paramount duty of doing all that is in our power to lessen the amount of physical suffering in the world."

Morally, this reasoning, acute and seemingly logical as it may be, is to us simply satanic. If it justifies suicide, much more does it condone

infanticide, murder of the old, sick, or deformed, and other equally pleasant customs of the ancients.

As, however, the abstract discussion of moral questions is somewhat out of the province of this journal, we would scarcely have noticed this pamphlet had it not been for certain sentiments which are embodied in the following quotation :

"That in all cases of hopeless and painful illness, it should be the recognized duty of the medical attendant, whenever so desired by the patient, to administer chloroform, or such other anæsthetic as may by-and-by supersede chloroform, so as to destroy consciousness at once, and put the sufferer to a quick and painless death; all needful precautions being adopted to prevent any possible abuse of such duty, and means being taken to establish, beyond the possibility of doubt or question, that the remedy was applied at the express wish of the patient."

Without further comment, we express the hope that if Mr. Williams or his supporters ever desire to reach this euthanasia, even the wealth of a Mr. Crayshaw will be unable to lead any physician to prostitute his office to that of an executioner.

PUERPERAL FEVER.

PUERPERAL FEVER is certainly very prevalent in some parts of New York city, and also, we believe, in this city. According to the official reports, however, in New York there have been this year, to June 6, two hundred and twenty-four deaths from such cause, whilst in the same period of last year there were two hundred and sixty-one fatal cases. But as average human nature is the same everywhere, and as we know that the official statistics in this city are worse than useless, we judge the figures just quoted are of no value. This does not arise from any fault of the officials concerned, but from the untrue death-certificates handed in by attending physicians. Thus, one prominent medical gentleman of this city was called in consultation during a recent month to no less than eight cases of puerperal fever, seven of which proved fatal, and yet during that month there was not a single death from such cause reported. During the same period another obstetrical friend was cognizant of some twelve cases, distinct from those already alluded to,—a large proportion ending fatally. If we were omniscient, no doubt this list could be greatly lengthened. But the evidence is sufficient for our purpose. A reputation for having cases of puerperal fever is such an evil possession that obstetricians not only do not covet it, but actually loathe it, and a euphemism is but a mere stroke of the pen.

However these things may be, it is certain that

during the spring there has been in Bellevue Hospital a most serious epidemic. In the winter there were a few very virulent cases, but in April a number of women were attacked almost simultaneously. Vacating the portion of the building previously occupied was tried, but after a fortnight the epidemic reappeared in a most virulent form,—ten out of the fourteen patients attacked dying. The Commissioner of Charities, at the suggestion of the physicians, then had all the pregnant women removed to a new, one-story wooden building on Blackwell's Island. Since this change the epidemic has very greatly abated, although several fresh cases have occurred.

In regard to the entire number of persons attacked, the records of the hospital show that from January 1, 1874, to June 1, there were fifty-two cases, with twenty-eight deaths from the disease.

PROCEEDINGS OF SOCIETIES.

PHILADELPHIA COUNTY MEDICAL SOCIETY.

A CONVERSATIONAL meeting was held Wednesday, March 25, 1874, at 8 o'clock P.M.

The PRESIDENT, DR. W. L. ATLEE, in the chair.

DR. W. B. ATKINSON called the attention of the Society to the epidemic at present prevailing. The eruption seemed to be in many instances a combination of that of measles and scarlatina. In several cases he had recognized a true diphtheritic deposit in the throat. All had more or less sore throat, and some had, in addition, brain-symptoms like those of cerebro-spinal meningitis. The eruption is prolonged, and does not disappear as is generally the case in rubeola or scarlatina.

One house, in a locality otherwise healthy, seemed particularly marked by the tendency, and had acted as a focus whence the disease had radiated to other cases. On careful investigation, he had been unable to find any cause, as defective drainage or the like. He has encountered cases of cerebro-spinal fever, so called, for the last six or eight months. In fact, this has been wide-spread through the country, and does not appear to be confined to any special district. As showing a tendency to blood-poisoning, he had recently met with several cases of purpura.

DR. M. O'HARA had seen a number of cases of measles recently. Three of them undoubtedly had gone through an attack of measles before; in one case only six months ago. He had seen no case like those mentioned by Dr. Atkinson, but the description tallied somewhat with the case of his own child, who died last July of cerebro-spinal fever, and he would like to know of the doctor if there were any signs whatever of affection of the spinal centres. Except a slight retraction of the nuchal muscles, no distinction could be made between this case and scarlet fever, or, later in the case, between it and mixed scarlatina and measles, with complications of a diphtheritic character. During the third week, in which the child died, it showed evidently that it had been all the way through a case of cerebro-spinal meningitis. He desired to know of Dr. Pepper what was his experience as regards second attacks of measles.

DR. W. PEPPER had seen several cases such as were spoken of by Dr. Atkinson. Some were ordinary measles, contagious, rash appearing on the fourth day, and terminating well. In a few others there was tonsillar and faucial trouble; the papules at the same time were more distinct, with thickening and infiltration of the skin. He had seen a few cases apparently of mixed scarlatinous type. In one case, a child of seven years of age had played with another who had had malignant measles. In her case there were prodromes of catarrh. There was a typical scarlatinous eruption about the neck and one thigh. The throat was sore, with white pseudo-membranous exudations on both tonsils. On the other portions of the body the eruption was rubeolous in character. There was no albumen in the urine. The pulse one hundred and fifty. Temperature high. Swallowing difficult. The cases to which Dr. Atkinson referred were apparently analogous to this last. He believed that both poisons coexisted in the case detailed above, and perhaps in others. There was very little pure diphtheria, but a large amount of scarlatina, in the city. The cases of Dr. Atkinson were possibly measles, modified by the scarlatinous poison. He had not met with the prolonged eruption. It sometimes occurs. Dr. P. replied to Dr. O'Hara that, in his opinion, second attacks were more common in measles than in any other eruptive fever.

DR. PRALL asked Dr. Atkinson if petechiæ occurred at the close of the regular eruption. He had seen only a few cases. He had seen three cases of second attacks of measles. In one case which recovered, petechiæ appeared, and continued two weeks. There were no head-symptoms or sore throat.

DR. G. HAMILTON said he had not been aware until this evening of the existence of such an epidemic as that alluded to. The general health of the city is exceptionally good. Measles prevailed throughout the city, so far as he had seen, in a mild form, and the reports of the weekly mortality showed only a small proportion of deaths from this cause. When measles and scarlet fever occurred simultaneously, as an epidemic, each disease seemed capable in some cases of being modified by, as it were, a sort of assimilative action exerted by the other. As members are present from different and remote parts of the city, it might be well for them to state whether cases similar to those seen, more especially in the southwestern portion, have occurred in their respective localities.

DR. T. MCKEAN had seen a number of cases on New Market Street near Vine Street. The population was very much crowded there. He had seen three and four cases in one house. There was in some cases throat- and spinal-trouble.

DR. W. M. WELCH remarked that he had under his care at the present time cases both of scarlatina and measles; but in no case were the two diseases combined. He had observed nothing unusual in either of the diseases, except that two of the cases of measles were second attacks. These patients were brothers; one of whom, a child ten years old, had undergone a previous attack at the age of one or two years; the other, a child aged seven years, had suffered from a previous attack three years ago, at which time the former child was exposed to the contagion without contracting the disease.

DR. W. PEPPER then read a paper on "The Operative Treatment of Pleural Effusions."

By request, the Secretary read from the *American Journal of the Medical Sciences* for January, 1855, p. 68, the notes of a case communicated to Dr. Bowditch, of Boston, by Dr. Washington L. Atlee, of a large collection of pus in the left pleural cavity, which had been successfully treated by repeated injections of iodine.

The case was reported by Dr. Bowditch to "The Boston Society for Medical Improvement," and subsequently by Dr. Morland, the Secretary of that association, in the above journal.

After the reading of the report, Dr. Atlee stated that although this case of pyothorax had occurred as far back as 1850-1, the patient, an extensive paper-manufacturer, is still living, in robust health, having required no medical attention since that time.

REVIEWS AND BOOK NOTICES.

UNIVERSALITY OF THE HOMŒOPATHIC LAW OF CURE.

By CHARLES NEIDHARD, M.D. Second Edition. Boericke & Tafel.

This little brochure having been sent to the *Times* for notice, we have read and re-read it carefully: at first with attention, then with amusement, and finally with astonishment. There are some things which, in themselves insignificant, become significant from their origin. When Napoleon writes, the world reads carefully, though the Napoleonic utterances be but twaddle. The author of the present pamphlet is a very Pharisee of the Pharisees among his brethren, and commands a large and lucrative practice among the best classes of our citizens. Yet, when he opens his mouth, what manner of pearls fall from it!

The man who could in cold blood put forth such utterances as those in this book is beyond the reach of the artillery of the reviewer; no cudgel of argument so heavy as to beat down his guard of ignorance; no arrow of sarcasm so swift and sharp as to pierce his panoply of non-perceptive power. Shall the fool perceive his folly, or shall he that was born blind see? Under the circumstances, we can but let Dr. Neidhard out of his own mouth convict himself, and without further comment offer some choice selections, which reveal the evidence upon which modern homœopathy relies for the proof of its tenets. We are sorry that want of space will not permit our extending these quotations.

"The best thief-catchers and detectives are those who formerly have been engaged in the same business,—that is, have been thieves.

"Political rings, united for the purpose of plunder, are best cured by similar rings united for the purpose of honest reform.

"A young gentleman afflicted with rheumatism and a severe cold in the breast was on the eve of being united to a beautiful young lady. In order to be cured, and before his marriage, he went South. . . . All the medical gentlemen with whom he consulted told him he could not live. Weary of physicians, he again went home to die. He was carried from the boat to the hotel more dead than alive. On the sixth day after his return he learned that his betrothed had been married a day previous to another, thinking her lover could not survive. All the friends of the deceived lover thought that this would prove fatal at once in his then state of health, but, instead of their fears being realized, in a week from the day of the reception of the unsuspected news he arose from his bed and rapidly recovered, and in less than a month was as well as ever. Disappointed love can cause consumption and rheumatism, but, when you have it, it may also cure it—a true homœopathic cure.

"Thus the doctrine of miasmatic diseases and homœopathy occupy the same platform. If one not acclimated or accustomed to a certain malaric effluvium, and inimical to his nature, is exposed to it, he falls sick, in the same way as he is cured by another agent similar to the nature of the miasma. This latter will probably be some plant growing in the neighborhood, or the

poison of some animal luxuriating and arriving at its full growth in the very marshes from which the disease is generated. Do you think that the plants which cure the malignant fevers of miasmatic districts could grow on high mountains?

"A vicious boy who pokes his umbrella into everybody's side is cured by letting him stand in a corner with an immense umbrella over his head until he is tired. Another who bends his head under the table to catch at boys' legs is told to lie with his head in a very uncomfortable position under the table until he is cured."

OBSERVATIONS ON THE PATHOLOGY AND TREATMENT OF CHOLERA. By JOHN MURRAY, M.D., Inspector-General of Hospitals, late of Bengal. 12mo, pp. 58. New York, G. P. Putnam's Sons, 1874.

Cholera has certainly been written about. Indeed, if our memory be not at fault, at least one monograph upon it has been published during the century. Nevertheless, as the offering of an eminent physician, who for forty years has fought the disease in its native jungles, we welcome this brochure heartily to our book-table. It contains but little that is absolutely new, but may be read with profit by almost any one, and may be accepted as an excellent guide in the treatment of this affection. One point made by the author is worthy of close attention. It is the existence of a stage of malaise before the premonitory diarrhœa, and the belief that the attack may often be aborted by judicious treatment during this period of incubation. The proper treatment of this premonitory state, Dr. Murray believes, is to be found in sustaining the strength, promoting digestion, keeping up the spirits, and avoiding exhaustion,—the free use of alcoholic stimulants and purgative medicines. The use of spices and quinine are advised, the latter very strongly so, in doses of two grains three times a day. Change of air and location, *i.e.*, removal from the infected district, is often of service, especially in the cases of encamped troops.

A CONSPECTUS OF THE MEDICAL SCIENCES. By HENRY HARTSHORNE, M.D. Second Edition. H. C. Lea, Philadelphia, 1874.

This work sums up medical knowledge in a thousand pages as an aid to student-cramming. So long as there is a demand for books of this kind, some one will supply it, and of its kind this book is about the best we know. It would, however, be a most hopeful sign of a medical millennium if such books ceased to pay.

GLEANINGS FROM OUR EXCHANGES.

TREATMENT OF FIBROUS TUMORS OF THE UTERUS BY HYPODERMIC INJECTION OF ERGOTIN (*The Chicago Medical Journal*, June, 1874).—Dr. A. Reeves Jackson and others report seven cases of uterine fibroid tumors, in four of which there was diminution of the size of the tumor, with marked general improvement; in another the tumor was not affected, but the pain and hemorrhage were destroyed; in one the tumor disappeared entirely and permanently, and in one there was no improvement whatever. The solutions of ergotin all produced pain, and were occasionally followed by abscesses: it was, therefore, found advisable to prepare a solution as follows: "Fifty grains of the extract (Squibb's) are dissolved in two hundred and fifty minims of water, the solution filtered, and made up to three hundred minims by passing water through the filter to wash it and the residue upon it. It represents ergot grain for minim, free from alcohol or other irritating substance." This rarely produces any pain or inflammation.

THE DIETETIC TREATMENT OF DISEASE (*The Lancet*, May 23 and 30, 1874).—Dr. E. A. Parkes found, in the course of some experiments on healthy men with different kinds of food, that a diet of dried meat and bread, without fats or vegetables, produced in two or three days very great indigestion and depression of spirits, with an acneiform eruption on the face and shoulders. These symptoms were at once removed by adding starches and butter to the same diet. This observation seems important in connection with dieting in fevers, where often such quantities of animal broths are given, and, with the exception perhaps of a little arrowroot, no starches and no fats are ordered. It might be that the best treatment for "irritable gastric dyspepsia" would be not to give vegetables at all or any nitrogenous food, but for two or three days to let only starches and fats, in some digestible form and without salt, enter the stomach. A meat diet has in some cases seemed to have a special influence on the skin,—psoriasis inveterata and eczema squamosum having been cured by Bantingism, omitting the alcohol used in that system. A purely non-nitrogenous diet lessens in a very great degree the acidity of the urine, and does so by preventing the formation of the acid. It also markedly reduces the power of the heart within twenty-four hours after the commencement of the diet. The beat is more feeble, the pulse is smaller and softer, and, if the sphygmograph is used, the height of the up-stroke is only half of what it is in the normal state of the man. This action may be useful when we wish to subdue a powerfully-acting and excited heart, or in the treatment of aneurisms. The men experimented upon took, on an average, ten ounces of arrowroot, six ounces of sugar, and two and one-third ounces of butter in each twenty-four hours. This quite satisfied hunger, and maintained weight and health. If it be deemed necessary to add nitrogen without giving meat or bread, a little ground rice may be added, one ounce of which contains three and a half grains of nitrogen; or an egg may be given, one two ounces in weight yielding about nine and a third grains of nitrogen. In regard to the influence of alcohol on appetite and digestion, the evidence obtained from three healthy men as to any increase of appetite or more vigorous digestion from small doses of alcohol was found to be rather more negative than positive, anything over two fluid-ounces of alcohol being found to lessen appetite if the stomach was empty, and to injure digestion. The quantity of alcohol given for the particular purpose of increasing appetite should not exceed one fluidounce of absolute alcohol in a day, and half an ounce is often enough. It should be given with food, and for many patients the best plan is to give rectified spirit, properly disguised, as a medicine. If a fattening effect is desired, and no gouty tendencies exist, beer containing a good deal of malt extract is suitable; if salines and acids seem desirable for the kidneys, the light French wines are appropriate; but in any case a natural wine as little doctored as possible should be insured.

THE RELATION BETWEEN ARTERIAL TENSION AND ALBUMINURIA (*The British Medical Journal*, May 9, 1874).—Dr. George Johnson objects to some recent assertions as to the cause of albuminuria in certain cases of scarlatina. Clinical observations have shown that in such cases there is often a condition of high arterial tension before the occurrence of albuminuria, and it may be assumed that this is the result of contraction of the terminal muscular arterioles excited by a morbid condition of blood; but it is not evident how this arterial tension explains the albuminuria: on the contrary, undue contraction of the renal arterioles excited by morbid blood would tend to lessen capillary engorgement in direct proportion to the increase of

arterial tension to which it gives rise. It is intelligible that albuminuria may result from engorgement of the Malpighian capillaries consequent on an impeded return of blood through the veins, or an increased afflux through unduly relaxed arterioles; but it is difficult to understand that albuminuria can be a direct mechanical result of increased arterial resistance and tension, and still more difficult to explain in this way the desquamation of renal epithelium and the other phenomena which occur in cases of acute Bright's disease.

POISONING WITH SIX DRACHMS OF HYDRATE OF CHLORAL.—Dr. Levinstein reports the case of a man of thirty-five, who was brought to a hospital at 9 A.M., having, with suicidal intent, half an hour before, swallowed six drachms of hydrate of chloral. He lay in a profound sleep, with congested face, heavy breathing, and pulse 100. Cold applications to the head. In thirty minutes the face became livid, the veins distended, respiration intermittent; temperature 39.5° C. Electricity was used, and led to regular breathing. In another half-hour a general pallor was observed, pulse gone, lachrymation, pupils contracted; temperature 32.9°. Injection of three milligrammes of nitrate of strychnine, upon which twitches were excited in the neck, chest, and the muscles of the arms and legs. Trismus now occurred, whilst the upper extremities were in a state of tetanic stiffness. With these symptoms the heart began to act again; temperature 33.3°. In a few minutes the collapse recurred, and was combated by frictions, sinapisms to the calves, and wrapping in warm blankets; temperature 34.6°. Respiration was kept up by electricity, but the circulation seemed completely arrested. Another subcutaneous injection of two milligrammes of nitrate of strychnine. Effect was the same as before; but, as respiration stopped now and then, galvanism was repeatedly used up to five o'clock in the afternoon. The patient remained, up to six in the evening, in a perfectly anæsthetic state. At seven the pupils reacted at the presence of a strong light, and the temperature was higher.

At three in the morning the sleep could only be interrupted by a strong galvanic current; but the patient swallowed a little milk, falling immediately into a deep sleep. At seven in the morning he could be roused by loud talking, and after taking milk he slept till one in the afternoon. Milk was given again, and he slept until 5 P.M., when he awoke quite refreshed, thirty-two hours after the ingestion of the chloral. No gastric disturbance whatever occurred, and he remained well for months.—*The Lancet*.

INTESTINAL OBSTRUCTIONS (*Atlanta Medical and Surgical Journal*, June, 1874).—Dr. Robert Battey strongly urges the persistent use of distensile enemata in cases of intestinal obstruction. He protests against the injunction contained in "Flint's Practice," that "the injections are not to be pushed beyond the point at which they are borne without much suffering," and calls in question the statement that "they will very rarely succeed after the invaginated portion of intestine has become swollen by congestion, and the peritoneal surfaces in contact have become adherent." He details successful cases in which twenty and twenty-five pints of fluid were injected until it had passed through the entire length of the alimentary canal and flowed from the mouth, and believes that in every case of intestinal obstruction, either feared, suspected, or known to exist, when the duration does not raise a well-grounded apprehension of gangrene, an anodyne having been premised, "a distensile enema ought to be the first, and for the most part need be the only, power invoked for the cure."

TREATMENT OF THE ACUTE STATE OF BLENNORRAGIA WITH CANNABIS INDICA AND BENZOIC ACID.—Dr. Lamaire says (*Jour. des Connaissances Méd.*), "During seven years I have in more than sixty cases employed cannabis indica and benzoic acid, when patients have applied to me too late for the abortive method to be resorted to, when the discharge has been purulent and micturition painful, and have never failed of success when I have employed them together. The haschisch alone diminishes the intensity of the disease, but is not always sufficient. Benzoic acid has made some cures, and several half-cures, but the two in combination have never failed.

"I advise the tincture of cannabis indica to be used in doses of two grammes, and the benzoic acid in doses of one gramme in a mucilaginous mixture, in twenty-four hours,—the usual hygienic measures being followed. For two years I have also used, with great success, injections of simple water, made as often as possible (ten to fifteen times in twenty-four hours), and have always been able to commence with the balsamic and opium treatment within four days at the farthest."—*N. Y. Med. Record.*

VULPIAN ON THE NERVES TO THE IRIS.—The dilator muscle of the iris is, it is well known, under the influence of the sympathetic nerve. It has been hitherto believed that all its fibres are derived from the superior cervical ganglion of the sympathetic. Some recent observations of M. Vulpian prove that we cannot regard this ganglion as their exclusive source. Experimenting upon dogs, he has removed altogether the cervical ganglion and adjacent part of the sympathetic trunk. Ten or twelve days afterwards, the animals having been put under the influence of curara until the motor nerves to the limbs had lost all their excitability, he applied strong induced electrical currents to the skin of various parts of the body. Uniformly there resulted a slight, but distinct, reflex dilatation of the pupil on the side on which the sympathetic had been removed. Hence he concludes that some nerve-filaments must reach the radiating muscle of the iris by some other path. Whether they pass up along the vertebral artery, or whether they are derived from the cranial nerves, is a question which remains to be decided.—*London Lancet.*

THE SIZE OF APERTURE NECESSARY FOR THE TRANSMISSION OF THE PLACENTA (*The Edinburgh Medical Journal*, April, 1874).—Dr. J. Matthews Duncan has made a number of experiments to determine the above point, and concludes therefrom that the placenta can be got away without disruption through an os of two inches in diameter, or a little more, and the hand can be passed through an os of two and a half inches in diameter, or a little more. The placenta is soft and lacerable, and can exert little force in distending the os. The hand is hard and firm, and can be used to dilate with considerable force. The os uteri is, in cases of placenta prævia, very rarely rigid and undilatable. It may, therefore, be safely asserted that, in the very great majority of cases of placenta prævia, the hand may be passed into the uterus, if the placenta can be extracted from it in a satisfactory manner without disruption.

METRRORRHAGIA TREATED WITH THE GALVANIC STEM PESSARY (*The Obstetrical Journal*, May, 1874).—Dr. J. V. Ingham reports two cases of extreme metrorrhagia which were successfully treated with the galvanic pessary, after all other therapeutic means had been exhausted. He found the following features common to both cases: 1, a persistent hemorrhagic tendency, unwilling to yield to the usual local applications; 2, an apparent similarity in the cause of the hemorrhage, it being

due, so far as could be ascertained, in both cases, to some degeneration or alteration of the mucous membrane of the uterus; 3, the same results followed the use of the galvanic pessary: the hemorrhage was supplanted by a profuse leucorrhœa, with some pelvic or uterine pains; 4, the recovery seemed to be complete in both cases, one menorrhagic period happening to both several months later, but not followed in either case by a second.

POPLITEAL ANEURISM CURED BY CONSTRICTION OF THE FEMORAL ARTERY (*New York Medical Journal*, May, 1874).—Dr. N. A. Robbins reports a case of popliteal aneurism of about three months' standing, occurring in a negro, aged 30. His leg was drawn up, swollen, and œdematous, and he was delirious from the excessive pain. The femoral artery was cut down upon in Scarpa's space, exposed, and Dr. Speir's artery-constrictor was applied. The instrument was kept on about three minutes, and then removed; pressure was kept on the femoral for ten minutes, in order to favor the formation of a clot at the constricted part. The wound was closed by wire sutures. The pain seemed to cease immediately after the operation, and for the first time for weeks the patient slept soundly. In ten days the wound healed, and in three weeks he was walking about almost entirely cured.

TREATMENT OF CHOLERA BY THE HYPODERMIC INJECTION OF CHLORAL HYDRATE (*London Lancet*, May 2, 1874).—Dr. Hall, in a paper published in the *Indian Annals of Medical Science*, states that in the cold stage of cholera, instead of exhaustion of the nervous system, as is generally supposed, there is intense irritation of certain sets of nerves. He suggests that the principle which should guide us in the treatment of this condition is the endeavor to quiet the nervous system by the action of pure sedatives, and recommends the practice of hypodermic injection of sedatives in the stage of collapse. Subsequent experiments as to the physiological effects of chloral hydrate have induced Dr. Hall to make a trial of this agent in cholera, and his practice has been followed by others with satisfactory results, so far as the reports at present extend.

ACUPUNCTURE IN DROPSY (*The British Med. Jour.*, May 23, 1874).—Dr. W. Munro reports two cases of general œdema, one dependent on organic disease of the heart, the other on anæmia. In both cases all kinds of diuretics were tried without success, but finally the former case was relieved and the latter cured by the frequent puncturing of the distended skin with small sewing-needles, making twenty or thirty punctures two or three times daily. This procedure always gave immediate relief to the dyspnœa and other distressing symptoms.

APPLICATION FOR BURNS.—M. Lebigot recommends the following mixture as having been very successful:

R Cape aloes, 4 ounces;
Water, 10 ounces;
Alcohol (90°), 3 ounces.

The ingredients are to be melted together in a china plate over a slow fire, allowed to cool, and then filtered, after which three more ounces of alcohol are to be added. It is then ready for use. A tablespoonful of the mixture mixed with a teaspoonful of acetate of lead and twenty tablespoonfuls of water constitutes an excellent remedy. It is to be applied morning and evening on the burnt parts.—*London Lancet.*

FORMULA FOR TASTELESS COD-LIVER OIL.—

R Ol. morrhue, 3ij;
Spt. lavand. comp., 3i;
Spt. vini Gallici, 3i.—M.

—*Boston Medical and Surgical Journal.*

TREATMENT OF WOUNDS.—The gist of Dr. Abeille's work on the above subject consists in placing a wound in the same conditions as if it were subcutaneous: protection from the permanent action of air, from the presence of sanious and serous liquids, etc. His method is contained in the three following points: 1, immediate reunion of wounds; 2, rare dressings every three or four days,—one is often sufficient; 3, applications of cold or tepid water to the dressings. The water is not employed with the object of "refrigerating" the surface, but simply of moderating inflammation, and of giving a degree of laxity and softness to the tissues. According to Dr. Abeille, when thus used it accelerates the process of reorganization.—*London Lancet*.

ENLARGEMENT OF THE SPLEEN IN SYPHILIS (*Irish Hospital Gazette*, May 15, 1874).—Dr. A. Weil calls attention to enlargement of the spleen as a new and important symptom of early stages of syphilitic infection. He observed it while the primary induration still existed, and remarks that it disappears under anti-syphilitic treatment. He thinks this symptom of the general blood-affection in the early period differs from the local changes which are observed to occur in the organ in the later stages of secondary or hereditary disease.

MISCELLANY.

LAUGHTER AS A MEDICINE.—*To the Editor of the Medical Press and Circular:* SIR,—Observing a paragraph under the above heading quoted from an American journal, I am reminded of a like case, forty years ago, in which I was myself the moribund patient. Many years ago, at Clifton, from excessive and forced study, I was seized with a nervous or low fever; I was confined to bed; my head was filled with thoughts and fancies of a confused and wandering kind—though reason never, I think, left me—for several nights. I could not sleep, and thought the power of coaxing that balmy restorer of "tired nature" seemed utterly gone, and all opiates made matters worse. A curious red half-circle showed itself on the whites of both eyes. I was attended then by Mr. Thomas Green (1833), of 9, Queen Square, a decidedly clever man. One day he visited me when in this wretched state of mind, and instead of doctoring me with doses he began to tell my mother, then in the room, a string of most humorous and wittily-pointed stories with great cheerfulness and brightness. It was agony to me to listen to such playful trifling in my awful state of mind. "As vinegar upon nitre, so is he that singeth songs to an heavy heart." Solomon's words I realized, till I cried out, "Oh, mother, do tell him to stop!" But on with his fun went this unsparing doctor till his time was up. No sooner had he left the room, and my mother gone down with him for a private talk about the wretched patient, than the full force of the fun and wit to which I had been compelled to listen with so much pain came on me like a flood. Against myself I began to laugh, and went on till the bed shook and my frame worked with the outburst of long-suppressed hilarity; relieving tears watered my wan cheeks, and a beautiful moisture came over the skin, and, best of all, sleep, with all arrears, resumed its blessed dominion.

IS HYDROPHOBIA MORE FREQUENT IN SUMMER THAN IN WINTER?—George W. Johnston, editor of *The Animal Kingdom*, says, "The report of the French government in 1852 was more exhaustive and minute in detail than any that had preceded it, and it has since been recognized as the most exact of all investigations concerning the pathology of the disease. Among a population of over thirty-two millions, the most careful attention was paid to every symptom having the remotest analogy to hydrophobia, with the following results: They reported 105 cases attributed to the bite of a dog, 20 to the bite of a wolf, 8 to that of a cat, and 5 to the bite of unknown animals. In 100 cases they learned when the bite was received, viz., 25 in March, April, and May, 35 during June, July, and August, 13 during September, October, and November, and 27 during December, January, and February. Statistics taken in our own country have given similar results, except that the number of cases occurring with us are shown to be greater in winter than in summer."

OVER-TRAINING.—The result of the over-teaching of children in the public schools of Massachusetts is declared to be most serious, more than two-fifths dying before they reach twelve years of age. The mortality from diseases of the brain and the nervous system is 11 per cent., whereas in Nova Scotia, where no child is, it is stated, sent to school before it is seven years old, and then only for six hours a day, the mortality from these causes is only 8 per cent. The only remark we have to make on this is, that even six hours is somewhat too much for a child of seven years old. Four hours of varied work demanding attention would, we think, be ample for any child, and the mortality might then drop to 2 or 3 per cent.—*London Lancet*.

MEANS OF DISCOVERING WHETHER RED WINES ARE ARTIFICIALLY COLORED OR NOT.—M. de Cherville, in *Le Temps*, gives the following useful hints for deciding whether red wines are or are not artificially colored: "Pour into a glass a small quantity of the liquid which you wish to test, and dissolve a bit of potash in it. If no sediment forms, and if the wine assumes a greenish hue, it has not been artificially colored; if a violet sediment forms, the wine has been colored with elder or mulberries; if the sediment is red, it has been colored with beet-root or Pernambuco wood; if violet-red, with logwood; if yellow, with 'phytolac' berries; if violet-blue, with privet berries; and if pale violet, with sunflower."

ACCORDING to a correspondent of the *Boston Medical and Surgical Journal*, a medical student can live in Vienna very comfortably for \$800 a year. A free passage across the Atlantic on sailing-vessels can often, if not generally, be obtained in our seaport towns, by a young medicus who is willing and qualified to act as the ship's surgeon.

HIPPOPHAGY.—During the first three months of 1874, 2111 horses, asses, and mules were killed for food in Paris. The number in the corresponding periods of 1872 and 1870 were respectively 1275 and 989.

DR. T. C. RENNER writes to the Department of Agriculture that several years ago he collected some poke-root (*Phytolacca decandra*) for medicinal purposes, and spread it at several places about the house to dry. Soon afterward he observed that there were many cockroaches lying dead, and upon examination found that they had been partaking freely of the poke-root. Some of the root was placed near their haunts, and the result was that it rid the premises of those insects. Since then he has communicated the remedy to others, who have tested it with satisfactory results.—*Popular Science Monthly*.

INTERNATIONAL COURTESIES.—Some time since, the *Clinic*, in discussing some actions of the *Medical Press and Circular*, used the following sentence: "The sneering allusions of this American-hating journal are easily accounted for by the well-known fact that nothing so pleases most Englishmen as derision of this country." In reply, the *Medical Press* denies emphatically that "nothing so pleases Englishmen as derision of America," and intimates that it makes more extracts from, because it finds more of interest in, American medical periodicals than from those of any other country.

THE MEDICAL PROFESSION IN AUSTRIA.—According to the latest data, the number of civil medical practitioners in Austria is 7072, of whom 3874 are doctors of medicine, and 3198 surgeons. There are 2354 military medical officers in the Austro-Hungarian monarchy, of whom 2139 belong to the army, 63 to the marine force, and 152 to the Landwehr.

DR. GEORGE DERBY died June 20, of abscess of the liver and peritonitis. He was Professor of Hygiene in Harvard Medical College, and Secretary of the Massachusetts Board of Health. In both offices he is said to have been most efficient.

FINE OF A DRUGGIST.—A Paris druggist has just been fined five hundred francs for selling, without an order from a physician, pastiles made of calomel.

HYDROPHOBIA.—According to M. Bourrel, a veterinary surgeon at Paris, *canine rabies* may be prevented by blunting the canine and incisor teeth of the animal. He has tried it.

IN Bremen, a sum of money has been collected to offer as a prize to the discoverer of the most economical and æsthetic mode of performing cremation.

PROFESSOR ROKITANSKY, of Vienna, has had the dignity of Baron conferred on him, as a Commander of the Imperial Austrian Order of Leopold.

CHOLERA attacked 765 persons in Upper Silesia during the period from February 1 to April 28, causing 388 deaths.

NOTES AND QUERIES.

THE MEDICAL STAFF, U.S. ARMY.

TO THE EDITOR OF THE PHILADELPHIA MEDICAL TIMES:

SIR,—At a time when the position of the medical staff of the army is occupying the attention of the American Medical Association and the

profession generally, I deem it advisable to bring before them one or two of the rules and regulations appertaining thereto, in order that, through their influence, orders which bring obloquy upon some of its members may be remedied; or, at any rate, if this be impossible, to show the present position of the medical staff. Instead of becoming more independent, as it should, in order to secure efficiency and fearless action on the part of medical officers, it is growing more subservient and powerless, even in its own department.

About three years ago, an order was issued—not, I am convinced, with the sanction of the Surgeon-General, for we all look upon him as a gentleman of the soundest sense and judgment—to the effect that "Soldiers must be examined by their captain or lieutenant prior to being sent to the surgeon." To the profession at large, such an order speaks for itself. It injures the soldier, for the simple reason that a man of bad character may very possibly be sick, and dangerously sick, too, but he is not allowed by Lieut. Smith or Jones to go on the sick-list, because said Smith or Jones knows him to be a man of bad character. Such an edict causes the doctor to be regarded as a secondary individual by the sergeants of companies or by tyrannical officers,—in fact, by all at the post. I ask, then, who is the doctor—Smith, Jones, or M.D.?

If Lieut. Smith's wife is sick, does he examine her case, and neglect to call in the doctor because he is of opinion that Mrs. Smith is malingering? Has Lieut. Smith studied medicine or hygiene? Has he studied that difficult subject, "feigned diseases," that such power is to be given him, to the ignoring of regular medical officers? Probably Lieut. Smith has read very little of anything, but may be an excellent judge of cigars and sutler's bad whisky, or be competent to decide upon the merits of the billiard-table, or he may be A1 from West Point, but he is certainly not a doctor, and I assert, and am sure my corps will unanimously support me in my assertion, that said Smith is not competent to decide whether a soldier is sick or not. Such an absurd regulation exists in no other army in the world. I quote it to show that we are retrograding, and becoming more subservient to the line, since the close of the war. Many line officers who look upon it as an infringement of the rights of the medical profession ignore said order, and fortunately many such still remain in the service. How long they will continue remains to be seen, since the periodical pseudo-economical fits of Congress are constantly rendering their positions less stable.

The assignment of medical officers is on a wrong system. Medical officers should be assigned by the Surgeon-General (and not on his recommendation) to the several departments, and, in these departments, by the medical directors of such departments, according to their rank in the corps. This is not done, and what do we find? Medical officers at the head of the list of captains serving at bad or inferior posts, and junior captains at larger or good posts, and, frequently, contract-physicians at better posts than either of the former.

The rank of an officer tells in every other department; why not in the medical? This mal-assignment, if I may be allowed to use the term, frequently arises from favoritism. Dr. Ellis truly says, in his "Diary of an Army-Surgeon," "But with the same system of favoritism that has cursed the army, many were given positions totally unfit for the service, to the unjust exclusion of more competent and experienced men." As in every other branch of the service, a medical officer should, by law, be allowed to claim precedence of posts according to rank, regardless of his agreeableness, or prowess at billiards, or ability for giving dinner-parties, or the beauty of his wife. "*Palmar qui meruit ferat*."

Two steps require, then, to be taken to make the medical staff desirable: 1, the medical officer must be the doctor; 2, medical officers must be assigned strictly according to their rank.

Could the American Medical Association prevail on Congress to pass "acts" to effect these desirable objects, it would receive the lasting gratitude of the medical staff.

A MEDICAL OFFICER.

ERRATUM.—The name of the President elect of the Massachusetts Medical Society is B. E. Cotting,—not Colting, as incorrectly printed in our issue of June 20.

OFFICIAL LIST

OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U.S. ARMY, FROM JUNE 23 TO JUNE 29, 1874, INCLUSIVE.

COOPER, GEORGE S., SURGEON.—Assigned to duty as Post-Surgeon at Benicia Barracks, Cal. S. O. 60, Department of California, June 17, 1874.

DE HANNE, J. V., ASSISTANT-SURGEON.—Granted leave of absence for four months. S. O. 138, A. G. O., June 23, 1874.

SATURDAY, JULY 11, 1874.

ORIGINAL COMMUNICATIONS.

THE OPERATIVE TREATMENT OF PLEURAL EFFUSIONS.

Read before the Philadelphia County Medical Society, March 25, 1874,

BY WILLIAM PEPPER, M.D.,

Professor of Clinical Medicine in the University of Pennsylvania.

(Concluded from page 629.)

BUT a few words remain to be said in regard to the details of the operation itself. It is desirable that the skin should be anæsthetized by ether-spray or freezing with ice at the point where the puncture is to be made, and that a short incision be made through the derm, so that the puncture of the intercostal tissues may more surely be effected. Trousseau advised that the incision through the skin should not exactly correspond with the puncture of the intercostal tissues, so as to diminish the liability to the entrance of air; but this is rendered superfluous by the fact that the relations of the skin and intercostal spaces are much altered after the withdrawal of the distending fluid. The puncture must be made with a quick, fearless thrust, so as to avoid entangling the point of the trocar in the layers of false membrane which may line the pleura. The distance to which it is deemed safe to introduce the trocar may be regulated by the manner in which it is grasped in the hand.

I prefer operating with the patient in the sitting or half-sitting posture, and usually select as the point of puncture the sixth or seventh intercostal space, about in the line of the anterior border of the axilla. Of course, in the selection of this or any other spot, it is assumed that we have carefully determined that there is no adherence of the lung at the point, and that, if on the right side, there is no danger of wounding the liver. Authorities differ, however, widely in the point recommended for the puncture. Laennec recommended the fifth interspace, a little in front of the digitations of the serratus major, as being the most dependent point in the horizontal position, generally the freest from adhesions, and the seat of the greatest quantity of fluid. Walshe approves of this position, as do also Townsend and Stokes, who draw an analogical argument in favor of a high point, from the elevated position in which the discharge commonly occurs when it is spontaneous or preceded by the formation of an abscess. This latter point, however, is certainly mechanically unfavorable, and I confess myself unable to feel the force of this argument used by the distinguished writers I have mentioned. It is true, indeed, that when pyothorax discharges spontaneously externally, the point of perforation is apt to be near the mammary region, and much difference of opinion has existed as to the constancy with which this region is selected. It will appear, however, I think, that the true explanation is that the point of perforation will be determined by the

width of the intercostal spaces and the thinness or weakness of the thoracic walls. The entire surface of the thorax, in a case of extensive effusion, is subjected to hydrostatic pressure, and though in some instances there may be special determining causes, such as extreme softening of the pleura at certain spots, it seems probable that it is where the wall is weakest that this pressure gradually causes yielding and perforation. If this view be correct, it is evident that there is no special advantage in puncturing the chest so high up, except in cases of so-called "paracentesis of necessity," where the condition of the tissues warns us either that perforation of the intercostal tissues is about to take place or has actually occurred, with an escape of part of the thoracic contents into the subcutaneous cellular tissue. In such instances, no choice remains; it is preferable to perform paracentesis, and to choose a spot that will correspond with the point of spontaneous perforation. The following case illustrates this practical rule:

Case IV.—Empyema; threatened spontaneous evacuation—attempt to avert this by paracentesis; subsequent spontaneous perforation; pneumothorax; wasting purulent discharge from both openings; and death.

John G., æt. 35, a large and finely-developed man, applied for treatment at the Dispensary of the University of Pennsylvania. On examination it was found that there was a very extensive pleural effusion upon the right side, which was apparently of about eight months' duration. His general symptoms rendered it likely that it was, at least in part, purulent. An operation was proposed, but refused: internal treatment was directed, but upon his next visit there was slight redness over a spot in the fourth interspace, a little outside of the line of the right nipple. The tissues here were slightly infiltrated, and tender upon gentle pressure. Paracentesis was immediately performed, the trocar being introduced in the seventh interspace in the line of the axilla, and a large quantity of pus evacuated. The lung expanded fairly, and no pneumothorax followed. Unfortunately, ulceration of the pleura in the fourth interspace advanced, despite the relief of tension, and in a short time, when a moderate quantity of pus had reaccumulated, a spontaneous opening formed there, and discharged a small amount daily, but with the admission of air and establishment of pneumothorax. After this the case did badly; the pus became irritating in character, and the patient's position was such that, as he was unwilling to enter the hospital, it was impossible to use injections daily. The point where paracentesis had been performed also reopened; the tissues of the right thoracic walls became markedly infiltrated; the amount of purulent discharge continued quite large; cough with purulent expectoration came on, and the patient died from exhaustion. No autopsy was permitted.

Bowditch selects a point on the posterior aspect of the chest, in the eighth or even ninth interspace. A number of successful cases have been reported where the puncture was made at this part; but I confess to a feeling of insecurity in making the puncture so low down on the right side as the ninth interspace. An additional objection to this spot for the operation is, that in case it becomes necessary to insert and retain a canula, it causes great inconvenience to have it projecting on the back of the chest.

After the entire effusion, or so much of it as may be thought desirable, has been withdrawn, the canula is quickly removed, and a small pledget of lint placed on the point of puncture and fastened in place by a strip of adhesive plaster.

In cases where the effusion is found to be purulent, it has been advised by some operators not to attempt to close the opening, but immediately to introduce a bent canula, which is to be permanently retained in place. I would, however, strongly advise that after the first puncture in pyothorax the operation should be terminated just as if the effusion had been serous, since I have in several instances known a complete cure to ensue without any reaccumulation. It must be admitted, however, that such a result is the rare exception. When, therefore, it is found that the pus has again collected to a degree justifying paracentesis, it is preferable to employ a larger trocar, and at the close of the operation to introduce a silver canula of suitable size and shape, which may be permanently retained until the secretion of pus can be arrested.

Let me ask your attention for a moment to the inconveniences and dangers which have been attributed to this operation, before speaking of the indications which appear to call for its performance.

I pass over some objections which were formerly urged,—such as the danger of syncope, the danger of wounding an intercostal artery,—because, with the improvements that have been introduced in instruments and mode of procedure, these accidents are but rarely observed. A more serious objection is that paracentesis is likely to be followed by a reaccumulation of the effusion, requiring a repetition of the operation. The fallacy of this objection was long ago shown by Trousseau. It is of course evident that if the indications which positively call for the performance of the operation present themselves and paracentesis is performed before the inflammatory process has entirely expended itself, and while, therefore, there is still a tendency to further effusion, there will be some increase or return of effusion. The amount of fluid which has been withdrawn, however, will probably prevent the re-development of dangerous symptoms of over-distention of the chest; while at the same time there will be a more favorable condition for the absorption of the effusion. This objection could have force only upon the supposition that the minute puncture required would excite so much increase of pleural irritation as to lead to the effusion of serum from that cause alone. But there is no ground, experimental or clinical, for believing this.

Again, it has been objected that there is danger that a serous effusion may be replaced by a purulent one, after paracentesis. It has already been observed that the direct effects of the puncture itself are of the most trifling nature. There may be some little localized pleurisy around the puncture, but this never extends to a degree capable of causing constitutional disturbance, or of provoking purulent secretion from the pleura. If, therefore, it ever happens that a serous effusion which has been withdrawn by tapping is followed by a purulent one, it

must depend not on the mere puncture itself, but upon some accidental circumstance attending the operation. This circumstance is the admission of a large amount of air to the pleural cavity, which, in some instances, certainly appears capable of exciting an unhealthy inflammation of the serous membrane. The entrance of air has accordingly been advanced as another great danger incurred by this operation. It is to be observed, however, in the first place, that by the use of any of the methods I have described it is easy to exclude totally the air; and again, that it has been repeatedly shown by experiment that a single admission of air, even in large amount, to the pleural cavity does not usually excite inflammation. Although, however, the anxiety which has been felt on this score has certainly been exaggerated, it is undesirable to allow air to enter the chest during paracentesis, since it is possible that its action upon the particular stage of pleural inflammation present may lead to more serious results than would follow its admission to a healthy pleural sac.

Another objection which merits consideration is the danger of wounding the lung. Our knowledge of the physical signs caused by effusions in the pleural sac is so complete that although in certain rare combinations of conditions the signs may be puzzling and misleading, it is very seldom that any doubt can prevail in our mind as to the existence of a considerable stratum of fluid beneath any point where certain signs are observed, and of the consequent separation of the lung from the chest-wall. Under these conditions, then, there need never be any hesitation in introducing a delicate trocar, connected with an aspirator, which will instantaneously reveal the contact of the needle-point with fluid. It will still be said, however, that the diagnosis is not always certain, and that to insure the passage of the needle through the thick false membranes lining the pleura it is necessary to give a vigorous thrust,—vigorous enough to enter quite deeply into the lung should it be adherent beneath the point of puncture. I repeat that this accident can very rarely occur if a careful examination be previously made. And further, it is to be remembered that by grasping the trocar with our fingers at a certain distance from the point, we can easily regulate the depth of the puncture. But if, after all, the lung should receive a minute puncture, I am inclined to doubt if any serious results whatever would follow. The lung is compressed, almost immovable, and not in a condition to allow pneumothorax to occur from such a trifling wound of its pleura. As to the injury of the lung-tissue itself, my recent observations of the great tolerance of the pulmonary tissues of punctures by delicate needles have convinced me that the slight wound of the lung inflicted by an aspirator-needle would not do much harm.

Having thus alluded to the operation itself, and shown how free from danger it is and how easy of performance, it is of the utmost importance to determine exactly in what conditions it is called for, and what are the precise indications for its performance. This is the more important, indeed, on account of this very facility of performance and freedom from danger, since these have led some to

recommend paracentesis indiscriminately in all cases of pleural effusion, without regard to the presence of any distinct indications for its performance. This seems to me greatly to be deprecated. I am convinced that such views have a direct tendency to induce neglect of the means of internal treatment, which are of themselves sufficient to cure many cases of pleural effusion, and which should be scrupulously employed, even when paracentesis is performed. I am convinced that this operation may be performed, especially in cases of acute pleurisy, at so inopportune a moment as to be injurious rather than beneficial. It is surely necessary, when in France, where the use of paracentesis in acute pleurisy has been most urgently recommended, we see the question gravely raised and discussed whether the alleged increase in mortality of pleurisy during the past few years may not be due to the indiscriminate performance of this operation,—it is surely necessary to draw clearly the line between those cases of pleural effusion where it is positively indicated, and those where it is not necessary or desirable.

The indications for paracentesis are drawn from—

1. The quantity of the fluid.
2. The presence of urgent symptoms of embarrassment of breathing or circulation.
3. The quality of the fluid.
4. The failure of internal treatment.

1. The mere excessive quantity of a pleural effusion may become a very urgent indication, without regard to the cause or duration of the effusion. In cases where the entire pleural sac is distended,—as shown by absolute dullness extending from the base of the chest to the very apex, and by marked displacement of the diaphragm, liver, and heart,—paracentesis should be performed without delay. I should urge this despite the entire absence of threatening dyspnoea. In several instances, where excessive effusion had slowly and latently formed, I have known sudden death to occur, apparently from extreme interference with the heart's action. And, even if such an accident does not happen, experience has shown that these monstrous effusions are very slowly absorbed, with great injury to the general health, and usually with marked and permanent deformity of the thorax.

2. In other instances, the development of extreme dyspnoea, with marked interference with the action of the heart, accompanied by occasional paroxysms of alarming, almost suffocative orthopnoea, calls for the immediate performance of paracentesis. The intensity of these symptoms depends, usually, upon the rapidity of the formation of the effusion, and upon its quantity. Thus, a quart of serum effused within forty-eight hours will often give rise to more alarming interference with breathing than a collection of four times that quantity which has slowly formed. Still, it occasionally happens that rapid effusions are tolerated with remarkable ease.

But whenever the above symptoms appear in a marked degree, delay is dangerous, and the operation is imperatively called for.

3. In all cases where the effusion is known to be purulent, paracentesis should be performed

promptly. Absorption is, of course, impossible; and the chance of an opening through the chest-wall or into the lung, before the strength of the patient is far exhausted, should not be counted upon.

The determination of this question can frequently be based upon the character of the general symptoms, particularly upon the degree and persistency of hectic irritation. In any instance where such symptoms lead us to suspect the existence of a purulent pleural effusion, it is a simple matter to introduce a very delicate exploring-needle attached to an aspirator.

4. Even in cases of moderate effusion, when medical means have been faithfully tried for some weeks without inducing absorption, or even checking the tendency to increase of the effusion, it is desirable to perform paracentesis. The practical difficulty, of course, is to determine in any given case precisely when this time has arrived. Probably no definite law can be laid down; but we must base our action upon the rate of increase of the effusion, upon the influence upon the general health, upon the existence of a tuberculous predisposition, upon the degree of respiratory and circulatory embarrassment. In general terms, the time during which delay should be allowed is from three to five weeks.

I have thus attempted to sum up the chief indications for the operation, and which, whenever one or more of them is present, would seem to render its performance obligatory. It will thus be seen that I would recommend paracentesis absolutely in pyothorax, and in hydrothorax dependent upon the above indications, as in acute pleurisy, in latent pleurisy with serous effusion, in cancerous pleurisy, in tuberculous pleurisy, and in passive effusions, as in cardiac disease.

I cannot leave this part of my subject without again adverting to the fact that, although paracentesis cannot, in my opinion, be regarded as an ordinarily necessary and applicable treatment in acute pleurisy, it may be urgently called for in that condition. The dictum of Louis that simple pleurisy is never an immediate cause of death is erroneous and misleading. I have already alluded to instances of sudden death from pleuritic effusions which I have myself seen. Copland has known death to occur very nearly as suddenly as from disease of the heart; and Walshe states that he has seen a strong man, proved by dissection to be free from any other kind of disease, unexpectedly perish from syncope under the influence of unilateral effusion.

There is but little to be said with regard to the immediate effects of the operation. After the flow is established, the patient rarely complains of much pain except in cases where strong suction is used, and where the lung is unable to expand, or where violent cough occurs. Usually there is a decided sense of relief even during the operation, though the respirations and pulse are often accelerated owing to excitement. There is very generally dry, hacking cough, as the fluid escapes, evidently caused by the entrance of air into the pulmonary tissue and the effort at expansion. Occasionally the cough is

frequent, paroxysmal, and very painful. Occasionally, also, the violence of the cough and the consequent rapid unfolding of the lung-tissue cause the rupture of minute capillaries, so that there may be the expectoration of a little blood-streaked mucus. In this connection, allusion may be made to the peculiar copious sero-albuminous expectoration which sets in, in a small proportion of cases, soon after the operation.

After the operation is over, and the patient has become tranquil, there is generally a reduction both in the pulse and respiration. It has been asserted that in cases of serous effusion the temperature remains unchanged after the operation, while if the effusion be purulent the temperature falls. I have no thermometric observations of my own in cases of pyothorax, but in quite numerous cases of hydrothorax the temperature has either remained stationary or fallen slightly. Thus, in Case II., where the effusion was purely serous, the temperature was $100\frac{3}{8}^{\circ}$ C. at 8 o'clock P.M. on the evening previous to operation, and two hours after operation was $98\frac{1}{8}^{\circ}$, $99\frac{3}{8}^{\circ}$ six hours later, and $99\frac{1}{8}^{\circ}$ ten hours after operation.

Among the unusual phenomena met with in paracentesis is the escape of blood, more or less mixed with serous fluid, towards the close of the operation. Several cases are recorded where a free discharge of pure fluid blood occurred from the canula. I have seen this same occurrence during paracentesis for ascites, and in both instances the hemorrhage probably occurs from minute vessels in the serous membrane, or from false adhesions, which give way so soon as the uniform pressure exerted by the effusion is removed.

Case V.—Mr. B., æt. 30, of well-marked strumous constitution, had a grave attack of diphtheria in the winter of 1872-3, and had never enjoyed his previous health since. In March, 1874, he consulted Dr. Yarrow, who found him suffering with extreme dyspnoea, connected with large double pleural effusion. The origin and development of this had been entirely latent. His condition was alarming, from the extreme degree of exhaustion, pallor, and dyspnoea which were present. Internal treatment caused a reduction in amount of effusion on the left side, but proved of little avail in regard to the right side; and I was called to see the case in May, with a view of determining the propriety of paracentesis. After careful consultation, we decided to puncture the right thorax in the sixth intercostal space, at the line of the anterior border of the axilla. Dieulafoy's aspirator was employed, and seventy-five fluidounces of straw-colored serum were withdrawn. The closing portion of the operation was very painful; evidently in consequence of the powerful traction upon the expanding lung. There was still more effusion, but the flow was interrupted by the lung coming in contact with the canula. Immediately after the operation the patient was seized with violent paroxysmal cough, which caused so much pain as to require repeated doses of opium. There was immediate relief of respiration, with a return of respiratory murmur over a part of the area from which it had previously been absent. About six hours later, a very alarming syncopal attack occurred, from which he was only roused by repeated and large doses of stimulants. During the night copious sero-albuminous expectoration commenced, and in the course of the next twenty-four hours almost a pint was discharged. This was compared by the family to the fluid

which had been evacuated from the chest, consisting of a clear, serous fluid, in which a large muco-fibrinous coagulum formed. There seemed no real purulent element with it. This copious expectoration continued for about forty-eight hours, becoming mixed with a considerable amount of blood. After this it diminished, and the blood gradually disappeared. The patient experienced a good deal of relief for a few days, but rapidly relapsed. Extensive coarse friction-sound appeared over the left side, followed by effusion. Edema of legs appeared, and diarrhoea set in.

The *after-treatment* of cases in which paracentesis has been performed must depend entirely upon the character of the fluid. In cases of serous effusion, the same internal treatment and external applications must be continued after as before the operation, in the hope of preventing any re-accumulation of the effusion, and of promoting the absorption of the remaining portion. So, too, after the first puncture in cases of pyothorax, a slight hope may be entertained that the lung will expand and no fresh formation of pus occur. But in the great majority of cases the effusion recurs; and it is generally conceded to be useless to attempt to close the puncture made in the second operation. It appears to me preferable to introduce immediately a drainage-tube, so that the pus can be evacuated as rapidly as it forms, and thus, by preventing any extensive accumulation, the lung be aided in expanding. The forms of drainage-tubes recommended by various authors differ considerably; but that which has appeared to me most useful is a silver canula, bent so that the portion introduced within the thorax shall lie nearly parallel to the chest-wall and thus avoid the expanding lung. It is necessary that the external part of the tube should be guarded with a shield, to prevent it from slipping into the chest, as well as to enable it to be readily fastened in place by adhesive strips; and it must also be furnished with a plug or valve so that it can be closed constantly, save at certain intervals, when it is desirable to allow the pus which has accumulated to escape. When the secretion is active, this should be done daily; but when the pus is formed but slowly, and is healthy in character, it is sufficient to allow it to escape every other day.

In the following case, this mode of treatment will be seen to have been entirely successful:

Case VI.—Mr. T., æt. 42 years, of very strong constitution, was attacked on March 2, 1870, with acute pleurisy of left side. He was at first under the care of a homœopathic physician, and grew rapidly worse; and on May 16 there were still evidences of large effusion, with marked general symptoms, emaciation, hectic fever, and prostration. Dr. Galvez, under whose care he had recently placed himself, tapped him on May 16, low down on the posterior aspect of the chest, and evacuated about one pint of thick, discolored pus. The wound closed, and all the grave symptoms returned. The case now passed under care of Drs. F. G. Smith and S. D. Gross, by the latter of whom paracentesis was again performed on May 30. The puncture was made in the eighth interspace in the median line of the axilla, and seven and a half pints of laudable pus were drawn off, and a silver canula, with a valve, introduced. The subsequent treatment was conducted by Dr. Smith and myself in consultation. The contents of the left thorax were evacuated daily; the amount of pus

remaining over a pint for some time, and then gradually diminishing. No attempt was made to exclude air, so that an extensive pneumothorax was formed, the lung being retained in the upper and posterior part of the thorax. Still the discharge continued constantly laudable and unirritating. At first the patient's condition was apparently almost hopeless. There was œdema up to the waist; the pulse was frequent, feeble, and irritable; and hectic fever was marked, with sleeplessness and anorexia. He was placed on the use of beef-tea and milk-punch, Basham's iron mixture, f3ss four times a day, and elix. bismuth., strychnia, and pepsin, f3i after each meal. No injections into the pleural sac were employed; as the lung expanded, a canula was introduced, curved so as to avoid touching the pulmonary pleura, and with a valve, so that the contents of the left chest could be evacuated daily. The symptoms steadily improved, and as the discharge diminished and the lung expanded, moderate contraction of the left chest occurred. The canula was withdrawn towards the close of August, at which time vesicular murmur was distinctly audible down to the point of puncture. I have seen him since several times (the last time only a few months ago); he is in perfect health, stouter than ever before, and with scarcely a trace of contraction of the left side. There is full and soft vesicular murmur over the whole of this side.

Very frequently, as in this case, it is impossible to exclude the air and prevent the development of pneumothorax after operations for empyema; but unfortunately the constant presence of air in large quantities in contact with the inflamed pleura and the accumulated pus is not always so free from harm.

It is true that, by the use of Dieulafoy's aspirator or Bowditch's syringe, it is possible to make repeated punctures with delicate trocars as frequently as the pus accumulates, and thus prevent the entrance of air. As I have never, however, had the opportunity of treating a case of empyema in this way, I can only mention it as well worthy of trial, although I suspect it will prove to be attended with some difficulties of its own. But when, after any form of the operation, the pus secreted by the diseased pleura is found to become offensive and irritating, it is necessary to employ some means to destroy its putrescence and irritating character, and modify the action of the inflamed surface. This is best done by injecting through the canula a quantity of whatever fluid seems appropriate to the case, so that it may be brought into thorough contact with the pleural surface. The amount of fluid thus injected should usually be from four to eight fluidounces; and after it has remained in the cavity of the chest a sufficient time, the valve of the canula may be opened, and the patient's body moved so as to cause it to escape. The frequency with which these injections should be repeated must vary with the effect produced by them; the milder ones may be used daily, while the stronger solutions, used with the view of altering the character of the action of the pleural surface, may be repeated at longer intervals.

In cases where the discharge is not offensive and putrid, but yet seems to possess irritating properties, quite large injections of tepid water frequently exert a soothing influence, and relieve irritation. If the discharge has become highly offensive, a small quan-

tity of liq. sodæ chlorinatæ or of a glycerole of carbolic acid may be added to the water.

When the putrescence has been relieved, and yet an obstinate, purulent discharge is maintained, ioduretted injections, as originally recommended by Boinet (*Archives Générales*, May, 1853), are probably the most useful. They have been frequently employed, nearly always with some beneficial result, and not rarely with the effect of gradually checking the discharge and aiding in a perfect cure. In my own experience, when the strength of the injections has been judiciously apportioned, I have never known the slightest ill consequence to follow their employment.

The formula recommended by Boinet was as follows:

Tincture of iodine,	10 to 50 parts;
Iodide of potassium,	1 to 5 "
Water,	100 "

Trousseau employed an injection of medium strength, containing 25 parts of tincture of iodine, 1 of iodide of potassium, and 100 of tepid water; and I should recommend beginning with solutions even of one-half or one-third this strength, and gradually increasing up to the latter strength, but not exceeding it, since severe iodism has been known to follow the use of stronger solutions. As the discharge diminishes, and the lung expands and the chest contracts, so that the pleural cavity is reduced in size, the amount and frequency of the injections may progressively be reduced, until finally the canula may be removed.

It need scarcely be repeated that, throughout the entire course of this treatment, the most scrupulous attention must be paid to the internal treatment and to the diet and hygiene of the patient.

HYDRATE OF CHLORAL IN PUERPERAL CONVULSIONS.

BY EUGENE P. BERNARDY, M.D.

ON the morning (8 A.M.) of December 26, 1873, I was called to attend Mrs. M., æt. 18, first confinement. The messenger stated that she had been in convulsions since six o'clock that morning. On my arrival I found the patient just recovering from a convulsion, and immediately ordered potassii bromid. in half-drachm doses every fifteen minutes. The patient was a perfect blonde, stout but short-built; her hands and feet pitted readily under pressure. After a good deal of difficulty I succeeded in making a vaginal examination: the os was dilated to about the size of a silver dollar, *soft and very dilatable*. The vertex was presenting, but I was unable to recognize the position. During the examination the patient went into a most fearful convulsion, her face, lips, and tongue becoming almost black; the bromide seemed to have no effect whatever. I then determined to bleed, but, by desire of the family, waited for Dr. William H. Hooper an hour, when, finding the convulsions steadily increasing, I took about eight ounces of very dark blood, almost black; this was followed by a moderation of the convulsions, but did not arrest them. Dr. Hooper having arrived, a vaginal examination was made; the os was found in the same condition as before. It was then decided to etherize the patient, dilate the os forcibly, and deliver as quickly as possible.

Having thoroughly etherized the patient, we commenced the dilating process with our fingers, until the os had opened to about two inches in circumference. The position having been made out (left anterior position vertex), and the bag of waters ruptured, we determined to apply the forceps,—the head as yet at the superior strait. While Dr. Hooper made pressure over the uterus, to steady the head and prevent it from slipping, I readily applied the forceps (Bedford's); extraction was made to imitate nature as closely as possible. In one hour and a half the patient was delivered of a living child, without the slightest injury to herself or it.

After the birth of the child, the ether was withdrawn, when the convulsions reappeared, and followed one another in rapid succession, steadily increasing in intensity. We then decided to give hydrate of chloral in scruple doses every half-hour. At the second dose the convulsions ceased entirely. The chloral was kept up every hour. At all times the patient could be aroused, the chloral never producing a profound sleep.

The patient was up and attending to her household duties on the 20th of January of the present year.

In looking at the above treatment, it will be seen that bleeding and large doses of bromide of potassium (one-half ounce was given in divided doses) had no effect on the convulsions, while forty grains of chloral arrested the convulsions at once. This is the third case in which I have used chloral with success. For my first case, see the *Philadelphia Medical Times* of January 15, 1872. The second case occurred in the summer of 1872; forty grains of chloral had the most decided effect, arresting at once the convulsions.

When I first prescribed the hydrate of chloral, in 1871, I had not heard of its ever having been used in puerperal convulsions. It was only two years later that I found an extract in *Hays's American Journal* (April, 1873), which referred to an article in the "Transactions of the Edinburgh Obstetrical Society," sessions 1869-70-71, page 50, being a report of a case of puerperal convulsions brought on through fright, treated by Dr. Alexander Milne (Jan. 25, 1870) with grs. lx of hydrate of chloral with perfect success.

In Leishman's "System of Midwifery," the use of hydrate of chloral is mentioned, pages 649-50. On page 650 is given an extract from an article taken from the *Gazette des Hôpitaux* of February 22, 1873, where chloral was given in puerperal convulsions with success. This would make it two years from the time I reported my first case.

It seems, therefore, that I must have been the first to use hydrate of chloral in the treatment of puerperal convulsions on this continent. There is no doubt but that Dr. A. Milne was the first to use the article in Europe, but for its use in puerperal convulsions in America I think I can justly claim the priority.

In the administration of chloral, there is no case of puerperal convulsions in which it cannot be given without fear,—there is not that hesitancy which is found in other practice. Take, for instance, bleeding: we all know that puerperal convulsions may arise from various causes,—from anæmia as well as from plethora. Now, if we decide to bleed, before we do so we ask whether this condition arises from anæmia or plethora. If from anæmia, we cannot

bleed, for we will most assuredly destroy our patient. In giving the hydrate of chloral no such fine question is to be decided.

The commencing dose should not exceed one scruple. It is better to give smaller doses repeated than large doses at long intervals: the system seems to be able to take up a smaller dose more readily; the effect can also more readily be watched.

The formula I generally use is as follows:

R Chloral hydrat., ℥viij;

Syr. aurantii cort.,

Aq. menth. vir., āā fʒij.—M.

Sig.—Tablespoonful every fifteen minutes or half-hour till convulsions cease, then every hour or two, according to circumstances. The medicine must be given in an equal quantity of water.

TRANSLATIONS.

DRAINAGE OF THE PERITONEAL CAVITY.—V. Mussbaum (*Berlin. Klin. Wochenschrift*), having seen the suggestion of Marion Sims to facilitate drainage from the abdominal cavity after ovariectomy by the perforation of the cul-de-sac back of the cervix uteri and the introduction of a drainage-tube, made use of this mode of treatment in some of his cases.

Upon several occasions when the operation had been of unusual severity, he, by the use of this treatment, obtained successful results, although from his former experience with similar cases he looked for a different issue.

W. A.

HYPODERMIC USE OF EXTRACTUM SECALIS IN HERPES ZOSTER.—Sachse (*Berlin. Klin. Wochenschrift*) stated in a meeting of the Berlin Medical Society that in the treatment of a patient with herpes zoster, who applied to him on the 11th of November, he made use of a solution of the ext. secalis in glycerin, with the most favorable results. He saw the patient again on the 13th of the month, and found that the pain had ceased shortly after the injection had been made, and that there had been no fresh eruption.

W. A.

POISONING FROM VANILLA-ICE.—Dr. L. Rosenthal gives (*Berliner Klin. Wochenschrift*) an account of some cases of poisoning from vanilla-ice which came under his notice in the latter part of August of last year. The entire family were affected with symptoms simulating those of cholera, and the severity of the symptoms was proportional to the amount of the ice which had been eaten. A small dog, after having been allowed to lick the plates, was also attacked with severe purging and vomiting. During the same night, other cases of a similar character occurred, and upon inquiry it was found that the patients had all indulged in the same sort of ice-cream, and that it had been procured from the same café. So far as Dr. Rosenthal knows, this form of poisoning occurs only after indulgence in vanilla-ice, so that although lighter forms of disturbance of the intestinal tract may be attributed simply to the influence of the cold, the origin of these severe symptoms must be sought in some constituent of the flavoring-matter. So far, he has obtained only negative results from his experiments, and is not able to give any positive information upon the subject. He suggests, as a possible explanation, that the irritant properties may be contained in some portion of the fruit which is not fully ripe.

W. A.

EPITHELIOMA CONTAGIOSUM IN CHICKENS (Professor O. Bollinger: *Virchow's Archiv*).—It is well known that numerous epidemic affections occur among the various kinds of fowls which are kept for domestic use, but in most of the accounts which are given of such cases the details are so meagre, and so little attention has been paid to the pathological conditions met with, that it is almost impossible to assign to these affections their true place among diseases.

Bollinger has made some observations in this direction, and while making investigations upon anthrax he made inoculations upon pigeons and chickens, satisfying himself that this disease is but slightly, if at all, communicable to birds. In the autumn of 1872 he had several opportunities of seeing cases of genuine diphtheritis in the larynx and fauces in various poultry-yards in Zurich, and more lately he has devoted himself to the study of a peculiar disease to which birds of this class are subject, which gives rise to an eruption suggesting that of smallpox, and which is characterized by great virulence and power of contagion.

In October, 1872, an epidemic broke out in a poultry-yard containing twenty-six fowls, and in a short time all the birds were affected; many of them died, and others became so miserable that the owner was compelled to kill them.

Some of the bodies were given to Bollinger for examination, and he found the following conditions. The bodies of the birds were much wasted, the muscular tissue being very white. About the head, especially upon the eyelids and around the eyes, were numerous tubercles of the size of a pea, which were grayish-white and reddish in color, and of a tolerably dense consistence. On the surface they were partly flat and partly irregular in consequence of beginning ulceration. Similar tubercles were found near the nasal openings and at the ear. In the interior of the cavity of the mouth, upon the hard palate and other organs, were elevations of various sizes up to that of a bean, which looked like condylomata. The digestive tract and the genito-urinary organs were found to be healthy, with the exception of being anæmic to a marked degree.

Microscopic examination showed that the smaller tubercles and those in an early stage of development had their origin in a thickening of the epidermis, which gradually increased in extent, and pushed itself into the subcutaneous connective tissue, which at these points was much thickened. As the growths progressed they were found to consist entirely of epithelial cells, and the growths inside the mouth upon the mucous membrane were of a similar character, but had to some extent undergone fatty degeneration. From the manner in which the disease had made its appearance and spread among healthy fowls which were in communication with those already diseased, it was supposed to be contagious, and this was soon demonstrated to be the case by experimental investigation. Healthy birds were taken and inoculated with matter from the tubercles upon those which were diseased, and in a short time phenomena were caused which resembled in every respect those which had been already noted, and the same uniformity was found in the appearances given by the rhinoscope. As soon as the contagious nature of the disease was established, all the fowls kept in the yard in which the outbreak occurred were killed, and the quarters which they had occupied thoroughly cleansed and disinfected.

In the spring of 1873 a new lot of chickens was purchased, and put into another part of the same yard, at least one hundred paces from the spot where the previous lot had been confined. In a short time the new-comers were attacked with the same disease, and many of them also died. It must then be concluded that epithelioma contagiosum, which appears as an

enzootic affection among chickens and perhaps also among pheasants, is a very contagious disease, which manifests itself by a tubercular eruption about the head of the birds, consisting of a limited hyperplasia of the epithelium, occurring principally upon such spots as are not covered with feathers. As a rule, a similar eruption is seen upon the mucous membrane of the mouth and fauces, and also upon the conjunctiva, and upon these surfaces it readily undergoes ulceration and cheesy degeneration. Catarrhal affections of the mucous membrane of the head are also common in conjunction with the other symptoms, and there may be a purulent conjunctivitis with secondary panophthalmitis, together with inflammation of the lining membrane of the nasal cavities, which can go on to suppuration.

Bollinger endeavored to inoculate this affection upon quadrupeds, and found that it could not be done. This fact, he thinks, goes to confirm the view drawn from its pathological anatomy, that the disease in question has nothing in common with cowpox, as some of the earlier observers have asserted; and he concludes, further, that all that has been previously described as vaccinia among birds has in reality been contagious epithelioma.

W. A.

THE CAUSES OF ALKALINITY OF THE URINE AND THE AMMONIACAL CONDITION.—MM. Feltz and Ritter give, in the *Journal de l'Anat.*, No. 3, 1874, an account of experiments performed by them, principally upon dogs, with the object of ascertaining what modifications the urinary secretion undergoes in the healthy body under certain circumstances. These experiments were as follows: 1, the urine was mechanically prevented from escaping by ligature of the urethra; 2, sounds impregnated with fermenting material were repeatedly introduced into the bladder, or small quantities of fermenting fluids were injected and the urine retained mechanically for some time; 3, solutions containing urinary ferments, urea, ferments of different ammoniacal salts, or of urine in a state of fermentation, were injected into the veins.

The following conclusions, based upon the results of their researches, were arrived at by MM. F. and R.:

1. The urine, except in affections of the genito-urinary apparatus, is rarely ammoniacal. When this condition is found, it has usually resulted from impurities in the vessel in which the secretion has been received, or from admixture with more or less altered albuminoid substances.
2. The urine placed in contact with ammoniacal ferment takes on fermentative action with varying degrees of rapidity in different cases, depending, apparently, on its chemical composition.
3. The urine of healthy animals, exempt from vesical or renal lesions, does not become ammoniacal when retained a long time in the bladder by mechanical means.
4. Sounds impregnated with ferment do not render the urine of healthy animals ammoniacal, unless such sounds are allowed to remain a long time in the bladder.
5. Slight alkalinity is produced by ferment introduced into the bladder and retained there some time.
6. Uræmic accidents cannot be attributed to either retention of urea or carbonate of ammonium resulting from its decomposition; for the first of these substances is innocuous, and the second only produces convulsions in such concentrated doses as it is difficult to admit can be formed in the blood.
7. The decomposition of urea into carbonate of ammonium only takes place under the influence of ferments or of chemical agents (of the latter no account was taken). This decomposition does not appear to take place in the blood, for simultaneous injections of

urea and ferment do not provoke uræmic accidents. It is only by increasing the proportion of ferment that we produce symptoms, to be referred, however, rather to septicæmia.

8. The chloride, tartrate, and other ammoniacal salts produce effects similar from a physiological point of view to those of carbonate of ammonium, when injected into the blood in concentrated solutions. They are rapidly eliminated by the urine and saliva. The tartrate and benzoate do not undergo their usual transformation; the urine never becomes ammoniacal, nor does the breath.

9. These salts in a solution so dilute as not to dissolve the blood-globules modify, nevertheless, the properties of the latter. This fact is demonstrated by microscopic examination and by analysis. The capacity of the blood-globule for absorption of oxygen is diminished; its resistance to water and to acetic acid is, on the other hand, increased.

10. May not some uræmic accidents be attributed to simple retention in the economy of ammoniacal salts normally eliminated by the urine, without invoking the aid of a previous transformation of urea into carbonate of ammonium?

THERAPEUTIC NOTES.

INJECTIONS OF A SOLUTION OF ERGOTIN IN PROLAPSUS ANI.—Von Langenbeck, of Berlin, is said to have been very successful in his treatment of prolapsus ani with hypodermic injections of a solution of ergotin, in the proportion of ten parts to one hundred parts of distilled water.

After the bowel has been replaced and the point of the syringe inserted into the cellular tissue, two grains of ergotin are injected. This should be repeated for four weeks on every third day.—*Physician and Pharmacist.*

EXTERNAL EMPLOYMENT OF PERCHLORIDE OF IRON IN VARICOSE VEINS.—Dr. Linon uses compresses wet with a solution of perchloride of iron, formed by adding one part of the liq. ferri perchlorid. to twenty-five parts of water. The compresses are kept in position over the seats of the varices by means of a bandage smoothly and somewhat firmly applied. After these compresses have been in place for twenty-four hours the venous dilatations seem almost entirely removed. The compresses are kept applied, however, until they are entirely gone, which is usually in from eight to ten days, according to volume.

By this dressing Dr. Linon says he has succeeded little by little in dissipating enormous varices, accompanied by violent pain and the appearance of black points on the skin. That the good effect thus produced is not due to the bandaging alone, is shown by the fact that the varices do not return after the bandages are taken off. Flannel bandages, Dr. L. thinks, are preferable to those made of linen, since they are more elastic, will contain more of the liquid, and do not become stiff and incapable of absorbing.

The following ointment has been used successfully by Dr. Kennard in the treatment of incontinence of urine in paralytic cases:

R Morphine sulph.,
Veratrine, aa gr. x;
Axungia, ʒii.—M.

Rub well into the perineum three times daily.

HYPODERMIC INJECTIONS OF STIMULANTS IN ADYNAMIC CONDITIONS.—A writer in the *Progrès Médical* advises the administration of diffusible stimulants by subcutaneous injections in those conditions of extreme

prostration where the administration of medicine by the mouth is difficult or impossible, and where it is desirable to produce a rapid effect. Camphor dissolved in twice its weight of oil of sweet almonds or thirty to forty drops of sulphuric ether may be employed in this way. Generally the patient feels a sharp pain for a few moments following the injection, but absorption takes place quickly, and the adynamia is successfully combated.

PRESERVATION OF VACCINE LYMPH.—Dr. Preston spreads the lymph on a morsel of paper, by means of a camel's-hair pencil charged from the vaccine vesicle; he then allows it to dry. If the vaccine matter is to be kept a long time, the paper should be covered with a light coating of albumen. In order to make use of this prepared paper, it is only necessary to moisten it slightly with the breath, and then to apply a fragment to the abraded skin.

TREATMENT OF INTERNAL AFFECTIONS BY INJECTIONS OF LARGE QUANTITIES OF WATER INTO THE LARGE INTESTINE.—Dr. Mosler (*Berliner Klin. Wochenschrift*), after alluding to Gustave Simon's demonstration that comparatively large quantities of water can be injected into the large intestine with impunity, suggests various cases in which this method of treatment may be made available. That such injections may penetrate as far as the ileo-cæcal valve has been shown in cases in which fistulæ have existed in this neighborhood. In several such cases, water introduced into the rectum has made its appearance within a few minutes at the fistulous orifice.

The best position for a patient while receiving such injections is on the elbows and knees, occasional lateral movements favoring the penetration of the fluid. The position on the back, however, may also be used. The usual injection-syringe may be replaced with advantage by a reservoir, hung at an elevation of two feet, and connected with a rubber tube and nozzle. This arrangement insures a steady and equal pressure of the fluid, which may be controlled by compression of the tube by the finger and thumb. Even such large quantities as five to nine pints of water may be slowly introduced without inconvenience.

The cases in which this method may be employed are the following: 1. In the different forms of intestinal obstruction, particularly such as arise from accumulation of fæces. 2. In cases of internal hernia, particularly diaphragmatic and retro-peritoneal. It is understood that it is only at an early period this method may be of use. Later, when softening of the tissues has set in, it would of course be dangerous. 3. In many diseases of the large intestine, particularly dysentery, where the injection may first be of use in cleansing the intestine of irritating debris, and then may be employed to make topical applications of astringent and disinfecting liquids. 4. In different forms of icterus, particularly the catarrhal, and in obstruction of the ducts by gall-stones. Recent researches have shown that injections of water into the intestinal canal augment the secretion of bile, which, from being thick and viscid, becomes quite fluid, and tends to carry off in its course through the biliary canals the accumulated plugs of mucus, and even perhaps the calculi occupying them. 5. In certain cases when a tænia may have been dislodged from the upper intestine, but has attached itself to the walls of the colon, where the ordinary tæniacides cannot reach it. In such cases an injection of mingled tepid water and milk to the extent of several pints often serves to bring the offender away. In the case of seat-worms the efficacy of such injections is unquestionable, and they should be large, for the parasite is as often found in the entire length of the large intestine as in the rectum alone.

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MEDICAL AND SURGICAL SCIENCE.

The Philadelphia Medical Times is an independent journal, devoted to no ends or interests whatever but those common to all who cultivate the science of medicine. Its columns are open to all those who wish to express their views on any subject coming within its legitimate sphere.

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EDITORIAL.

REPORT OF THE PHILADELPHIA BOARD OF HEALTH.

IT is very rarely that a conscientious journalist has an opportunity to say a word of praise regarding any matter connected with our city government. Wendell Phillips's assertion that republicanism has never yet solved the problem how to rule large cities has too much truth in it. *Raptores et oscines*, the birds of prey and the finches, the plunderers and the plundered, the politicians and the people, express the general condition of affairs. It is therefore with unfeigned pleasure—the pleasure of a novel experience—that we commend most heartily the Report of our Board of Health. Who its real author is we do not know, but the work has apparently been mainly performed by Dr. William H. Ford, and we congratulate him and his coadjutors on the result. Of course, in the space of an editorial we cannot follow the long line of statistics, reproof, warning, and argument here marshalled, but for the sake of those who may not see the report we note a few things that have especially attracted our attention.

First in importance, it seems to be clearly made out that Philadelphia is the most healthy city in the world, so far as the records are known. This is shown by the following figures, compiled from the report of the English Registrar-General:

"According to the report referred to, then, the annual death-rate per thousand inhabitants of certain prominent cities is as follows:

Philadelphia	22.1	Turin	30.4
London	22.7	Florence	31.6
Paris	24.4	Rome	32.2
Bombay	27.6	Vienna	34.4
Berlin	29.9	Madras	37.6"
New York	30.1		

A curious fact which shows the distinctively religious cast of the community is that of 7891 marriages which occurred during the year, only 53 were civil, all the others being performed by clergymen, using religious ceremonies. Whether there is any connection between the low mortality and the decidedly religious tone of our people is, perhaps, hard to say. But factors whose influence in reducing the death-rate cannot be gainsaid are the wide extent of territory covered, the exceedingly comfortable housing of the poor, with the consequent lack of crowding, and the excellency of the food and water supplies. Although our saying it may raise a cry of horror among the orthodox sanitarians, yet we have long harbored a suspicion that the lack of sewerage and the habitual use of open cesspools that prevail have something to do with the great freedom of our city from malignant epidemics of typhoid fever and similar diseases.

A discussion of this point at length would lead us too far away from the matter immediately at hand, but we may briefly indicate a few of the reasons for our suspicions. It is, we think, well proven that decaying animal matter is not nearly so deleterious to human health as when the putrefying mass is a mixture of vegetable and animal matter; and the more complex this mixture is, the more serious are the results apt to be. Now, in sewers, animal and vegetable matters of all sorts are conjoined into one mass. In cesspools usually, at least in this city, the contents are almost wholly animal. Again, the risk to health depends more upon the concentration than even upon the amount of the poison. In open cesspools diffusion of the mephitic vapors occurs. In sewers, badly or not at all ventilated as they often are, the vapors collect into densely poisonous masses. Further, cesspools are almost universally distinct from the dwellings, whilst sewers connect, by means of the water-closets, directly with the palace as well as the hovel, and no words of ours are needed to call up examples where a sudden puff or a diffusing stream of vapor rising from the water-closet has produced most serious illness. Be these things as they may, the fact remains that malignant, epidemic, contagious typhoid is almost unknown in this city. Out of some hundreds of cases of enteric fever which have come under our notice, we have never yet been able to trace one to a definite introduction of a poison into the system, and we have never seen any

epidemic influence, and have never witnessed the slightest contagion.

The Philadelphia system of emptying the cesspools is certainly as disgusting as it is disgraceful and inexcusable. We suppose there is not one of our city readers who has not, when taking ladies home from parties, opera, etc., been compelled to pass by the practically open night-carts, with the buckets of filth passing from hand to hand, and to breathe an air perhaps as heavily laden with the curses and obscene language of the degraded workmen as it is with the vilest of odors. According to the report before us, there are several machines which obviate all this. One of them, which works upon the same principle as Dieulafoy's aspirateur, seems to us especially commendable. A metallic air-tight tank has the air pumped out of it by means of machinery whose motive power is found in the wheels of the cart which conveys the apparatus to the place where it is to be used. Then, a metallic pipe being run into the cesspool and a cock opened, all the liquid and semi-liquid contents are noiselessly and odorlessly transferred to the chamber or chambers employed. After this, the comparatively small amount of matters too solid to be pumped up may be removed by means of metallic buckets with screwed covers.

Great interest always attaches to the statistics of marriages and of births and deaths in a community. We have already noted the number of the first of these, but may now mention, as instances of the ruling passion strong in death, that two men over eighty years of age took unto themselves blooming brides,—one of the latter being in the thirties, the other in the forties. The number of successful births during the year was 17,811, of still-births 891, of deaths 15,224: so that our city added to its population some twenty-five hundred persons by natural increase.

In praising, as we have done, the report before us, it is not because we are satisfied with the sanitary administration of our government, but because the health board seems to be doing all it has power to do, and because it is continually trying to influence those great curses of Philadelphia,—its City Councils, or legislative bodies, and its executive departments.

Lying between two rivers, all bathing is prevented by a stupid application of a good ordinance, and no free bath-houses are provided for use during our intense summer heat; surrounded on all sides by suitable country, the dead continue to be actually piled one upon another in cemeteries situated in the oldest and densest portions of the city.

With a past reputation for cleanliness second only to that of Holland, and paying enormous sums yearly to contractors for cleansing our streets, the filth so abounds in our city that Dr. Ford must have meant to be facetious when he says the work of street-cleaning has been "conducted under contract;" if he had been writing soberly he certainly would have put it, "neglected under contract." So we could go on complaining *ad infinitum*; but what is the use? who cares? Surely not the "ring" that rules us with its iron despotism.

FROM a letter dated London, June 10, 1874, received by a medical gentleman of this city, we learn that Mr. Erichsen is about to visit this country on a tour of pleasure and of observation. He will leave England on the 30th of July; and, after spending a few weeks in Canada, where he has friends and connections, he will pass into the United States, where, we are sure, he will everywhere meet with a cordial welcome from his professional brethren. As a surgical author, Mr. Erichsen has won for himself a world-wide reputation.

PROCEEDINGS OF SOCIETIES.

PATHOLOGICAL SOCIETY OF PHILADELPHIA.

THURSDAY EVENING, MAY 14, 1874.

THE PRESIDENT, DR. WM. PEPPER, in the chair.

DR. L. A. DUHRING presented, under the microscope, a section of *lupus vulgaris*, a full description of which will appear in the next number of the *Medical Times*.

Dr. C. H. BURNETT exhibited a *polyp removed from the left ear* of a large, healthy young man, 21 years old. The patient states that he has been aware of the existence of the polyp in his ear for seventeen years. He assigns no reason for its occurrence, and says there has never been much discharge attending the growth of this body in the ear. There has never been any operation even attempted on the ear, although he has frequently requested physicians to remove the polyp since it has extruded itself from the orifice of the meatus.

Upon inspection of the affected ear, I find the orifice entirely closed by a "button" of the polyp, covered with integument, and a trace of hardened secretion around the orifice of the meatus, at the sides of the aforesaid "button." There is no odor whatever, nor has there ever been, according to the patient's statement. It was impossible to see beyond the already crowded orifice of the meatus, and I therefore, after testing the hearing, proceeded to extract the polyp.

The hearing for a watch, audible at forty feet, was reduced to contact, and the hearing for the voice was reduced so much as to render the left ear useless in conversation.

I passed the wire noose of a Blake's-Wilde's snare

over the projecting "button," and came into a widened meatus, proceeded with the instrument as far inwards as I could get it, and then constricted the innermost part of the growth, and, with the most powerful traction I could make, brought away the polyp. This operation caused the patient *no pain*. There was considerable hemorrhage for three to four minutes (about two ounces), then the hemorrhage ceased almost instantaneously of its own accord. The patient states that next day, while stooping at a spring to drink, his ear suddenly gave forth a gush of blood, but stopped bleeding as suddenly as on the previous day.

After the removal of the polyp, which was of a sigmoid shape, I found the meatus greatly widened and excavated posteriorly, where the larger curve of the sigmoid-shaped polyp had been lying.

I could not detect any odor in the ear, nor was there any confined discharge behind this large polyp.

After the operation, the hearing for the watch rose to six feet, and conversation was heard on the left side. I touched the point of attachment of this growth with chloro-acetic acid several times, causing great pain for a few moments. The pain from the use of this acid is always relieved by a syringeful of warm water. I am unable to state the appearance or condition of the membrana tympani, since the fundus of the meatus auditorius was entirely filled up by the broad cut surface of the pedicle of the polyp.

The specimen was referred to the Committee on Morbid Growths, which reported May 28, 1874, as follows:

"The large aural polyp presented at the last meeting by Dr. Burnett measures an inch in length and half an inch at its widest diameter. The growth is more or less distinctly lobulated, and covered with a firm, whitish membrane. The most pendent and exposed portion of the growth is covered with layers of flat epithelial scales, appearing as narrow, spindle-shaped cells when seen in profile. Towards the pedicle, however, the growth is covered with a cylindrical epithelium; having a long tapering extremity, and furnished with a large vesicular nucleus; the broad free extremities are still occasionally furnished with a fringed, ciliated margin. The entire peripheral border of the growth is more or less distinctly marked with low papillary elevations; in the spaces between them, corresponding depressions occur, into which the epithelial layers are seen to dip down, the size of the cells gradually decreasing and becoming more rounded until they reach the basement membrane; the whole presenting a picture closely resembling that of the rete Malpighii of the skin.

"The interior of the growth is densely packed with small, round, finely-granulated and nucleated cells; upon pencilling these away, a very delicate fibrillated stroma is seen, the fibres of which cross each other in every direction.

"The blood-vessels are quite numerous, and, being filled with a natural injection, are very prominent. The larger trunks, occupying the more central portions of the tumor, send out radiating branches towards the periphery.

"There are also present in the growth a very few mucous glands, whose efferent ducts are seen in the transverse cuts as circular spaces lined with a single layer of cylindrical epithelium. A few of the sections made, fortunately, exhibit the branching and racemose extremities of these ducts. These microscopical appearances, as briefly mentioned above, led your committee to designate this tumor as a *mucous polypus*,—by far the most frequent variety of aural polypi. The presence of the ciliated epithelium can leave little doubt as to its origin from the mucous lining of the tympanic cavity. In fact, modern investigations tend to make this mem-

brane the sole source of all aural polypi; the cutis lining the external meatus taking little or no part in their production.

"These mucous polypi of the ears do not present any histological features differing from those hyperplastic conditions of the mucous membrane of the nose, vagina, and other localities which lead to the formation of polypoid growths. Like them, they are also liable to undergo myxomatous degeneration; at least such has been the experience of some members of your committee who have given considerable attention to the investigation of aural tumors. The gelatinous consistency and translucent appearance of the lower third of this specimen led to the suspicion of myxomatous degeneration having occurred in it. But the absence of any mucin reaction and of anastomosing stellate corpuscles did not warrant such a conclusion. The only case so far recorded where the entire aural polypus was a pure myxoma is that of Steudner, to whose valuable paper* upon 'The Pathological Anatomy of the Aural Polypi' we would refer those who may be interested in the subject."

Dr. BURNETT also presented a *blue bead* seven mm. in diameter, four mm. in thickness, and perforated at its centre, removed with a mass of inspissated cerumen from the right meatus auditorius externus of a woman 68 years old.

The patient was entirely unaware of its presence in her ear, and, of course, could give no account of its mode of getting there. It was in all probability placed there in her childhood and forgotten, as it produced neither pain nor deafness.

Lately, however, the accumulation of cerumen became so great as to cause deafness, and the removal of the obstructive mass to relieve the deafness led to the discovery of the blue bead.

Dr. JAMES TYSON presented the following specimens:

1. *Lungs from a case of acute catarrhal pneumonia with secondary miliary tuberculosis of the pleura*, removed from J. W., aged 33, an Irishman and a seaman of rather intemperate habits. He had descended from healthy parents, and had himself always been well up to two months before admission to the Philadelphia Hospital on March 11, 1874. About January 1, 1874, after exposure while drinking heavily, he contracted the illness from which he died. This began with a cough, some dyspnea, and white expectoration. At first he did not think much of it; but, having lost a good deal of flesh, and beginning to have chills, flushes of heat, and sweats, he determined to enter the house. There has never been any hæmoptysis.

On admission, March 11, 1874, he was somewhat emaciated, but not very anæmic; his tongue was coated; he had no appetite, and his bowels were loose; except that he was weak he said he felt very well, coughing scarcely any, with white expectoration. There was, however, fever. He was ordered quinine, counter-irritation by a blister, and opium to control his bowels.

On *physical examination*, there was observed more motion of the left side throughout than the right. In front there was no difference in the vocal fremitus, nor in the sides of the chest. *Percussion on right side* revealed diminished resonance as far as the fifth rib anteriorly. *Left side*, resonance was normal in front and in the side.

Auscultation.—*Left lung* in front and side is normal; some harshness at the very apex. *Right lung* in front—distinct blowing breathing at apex, becoming almost normal as we reach the base; on forced inspiration, crepitant râle is heard from the third rib upwards.

Posteriorly.—*Left lung*, supplemental breathing

* Archiv. f. Ohrenheilkunde, Bd. iv. p. 199.

throughout. *Right*, from spine of scapula down, broncho-vesicular; but above, a dry crackling is heard, and prolonged, almost blowing expiration.

March 18.—Another blister to the right apex. Ordered yesterday milk-punch, his pulse being weak—114. He was ordered on admission, besides his quinine, a mixture of liq. potassæ, $\mathbb{M}\text{v}$; syr. tolu. tinct. digitalis, āā gtt. v, and liq. potassii citrat. Bowels yet somewhat loose, though easily controlled by Dover's powders given at night. Coughs very little; expectoration continues white and frothy.

March 19.—The alkaline cough-mixture was stopped, and gr. iii of quinine, j of digitalis, and $\frac{1}{4}$ of opium given four times daily.

March 22.—Bowels are regular; feels very weak. Quinine and punch continued, with a mixture of liq. ammonii acetat., ammonii carbonat., gr. v; tinct. opii, gtt. v, tinct. digitalis, gtt. vi, every two hours.

On March 21 was noted a marked disposition to drowsiness.

April 6.—Condition continues about the same; temperature ranges from 100° to $101\frac{3}{4}^{\circ}$, and pulse 120.

April 10.—Is failing; ordered a cough-mixture containing bicarbonate of sodium, muriate of ammonia, and syrup of ipecacuanha, hoping, if possible, to *thin out* the deposit in the lungs; also a large poultice over his chest.

April 16.—Is undoubtedly better since the institution of last treatment. Temperature $100\frac{3}{4}^{\circ}$, pulse 117. Skin moist. On auscultation, the crepitant râles seem to have disappeared from the right apex and the axilla. Posteriorly, however, the crepitation is distinctly heard in the right supra-spinous fossa. In the left lung anteriorly are heard coarse bubbling sounds, and posteriorly, some sibilant rhonchus. Treatment continued.

The amendment referred to was not permanent: he continued gradually to grow weaker, and died May 12, 1874.

Post-mortem examination.—On opening chest-cavity the pleuræ of both lungs were thickened: that of left to the extent of three lines; the right one less markedly so. The external surface of right pleura dotted throughout with gray granulations; pleura of left lung, which exhibited the most marked thickening, has no gray granulations; diaphragmatic pleura (right side) also covered with these granulations; and so, too, the external surface of pericardium. Old cavities in each apex, the larger one ($1\frac{1}{2}$ inches in diameter) in left apex; the smaller one, with breaking-down walls, in the right one. A solid, cheesy deposit occupying whole upper half of right lung and nearly as large a portion of the left lung. Few miliary gray granulations scattered throughout lower part of lung; but none apparently in the left. In extreme lower part of left lung, in contact with pleural base, was found a little nest of cheesy deposit, three-quarters of an inch in diameter. No miliary gray granulations in brain-membranes, peritoneum, or pericardial sac. Liver very large and fatty, weighing five pounds two ounces. Kidneys passively congested, but otherwise normal.

Remarks.—A study of the temperature-record carefully kept throughout his illness, but too lengthy to be introduced here, reveals the striking difference between the morning and evening temperature so characteristic of acute catarrhal pneumonia. Although the case was carefully watched to this end, there was no change or symptom to which we could point as indicating the onset of the miliary tuberculosis. The symptom of drowsiness was once noted as one likely to indicate this complication; but the absence of tubercle from the membrane of the brain proved this suspicion to be unfounded.

2. *Aneurism of the arch of the aorta, with enormous hypertrophy of the heart.*—The specimen was removed

from a Canadian, a baker, aged about 55 years, who had been under Dr. Tyson's observation for five or six years. He was the subject of a double rasping murmur of great loudness, which could sometimes be heard at some distance from the body. There was also a very marked upheaving impulse, which influenced the entire anterior wall of the thorax. He was subject to attacks of extreme dyspnoea, in one of which he died.

At the *post-mortem* examination there was found to be no rupture, and perhaps the most striking feature in connection with it was the small size of the aneurism, which the physical signs led one to expect to be large. This involved the extreme upper portion of the arch of the aorta, but was a true sacculum of all the coats, large enough to receive a good-sized walnut, and slightly constricted at its entrance into the vessel. The aorta was atheromatous.

The extreme size of the *heart* was also striking. It weighed thirty-five ounces, and was evidently the direct cause of the upheaving impulse so marked before death.

3. *Cancer of the gall-bladder.*—P. G., aged 63, was admitted to the Philadelphia Hospital March 5, 1874; born in Ireland; was formerly intemperate. No history of cancer in the family. Has been a very healthy man. Ten years ago an epithelioma appeared on his lip; it gradually increased in size, and has been operated upon three times,—the last time, a year ago, in this house, by Dr. Pancoast. Since admission he has presented the same pale, anæmic appearance he does now. There has been constantly aggravated dyspepsia, relieved only by milk diet; also occasional attacks of vomiting, which would last for over twenty-four hours, and accompanied by quite severe colic. His bowels are very costive, and a diarrhoea is very apt to set in when the bowels are opened artificially. The normal tympany seems to prevail throughout the abdomen. Since admission, has been taking a mixture containing tinct. ferri chlor., nitro-muriatic acid, and extract of taraxacum.

April 15.—Has been steadily improving as to his symptoms, though he still has the same anæmic, cachectic appearance. Discharged him to out-ward department.

April 28.—Has re-entered the wards, having had another attack of vomiting, with aggravated dyspeptic symptoms.

Ordered him milk diet, and a mixture containing tinct. ferri chlorid., tinct. gentian. comp., and infusion of columbo.

May 4.—There has been no vomiting for the last three or four days, but he is rapidly emaciating. Pulse 84, of fair volume. Tympanitic percussion continues throughout his abdomen, except over a small area midway between ensiform cartilage and umbilicus, and rather a little to the right of the median line. Palpation discovers an uncertain hardening above the umbilicus.

May 5.—Died this morning.

Post-mortem examination, five hours after death.—Body exceedingly emaciated, the skin being drawn tense over the bones; skin of a dark sallow color. On opening the abdominal cavity, the mesenteric glands were found very much enlarged. Pancreas healthy, as also the stomach's cardiac and pyloric extremities. Stomach was greatly distended by gas, and its upper surface, especially to the right, was firmly matted to the under surface of the liver. There was no gall-bladder found, but its place was occupied by a large cavity, which was bounded by the posterior surface of the stomach and under surface of the liver, this organ being destroyed to a considerable extent. The cavity contained some fluid, and small cheesy lumps. The wall between it and the stomach was very thin. The

intestines were healthy. The specimen was supposed to be one of cancerous disease of the gall-bladder.

Dr. J. C. WILSON presented a specimen of *aneurism of the abdominal aorta*.

J. J., æt. 24, a muscular, well-developed negro man, by occupation a waiter, was seen for the first time in the evening of April 23. He was suffering intense abdominal pain, which he stated to be paroxysmal and to have been present only six or seven days, but not severe enough to interfere with his work until the day before I saw him. The focus of this pain was in the epigastrium; it was also referred to the lumbar region and to the left chest posteriorly. It was aggravated by lying on either side, was unaffected by cough or deep inspiration; there was slight general tenderness of the abdomen. The bowels were somewhat constipated, tongue covered with a thick whitish fur. The patient had no desire for food, and no vomiting after taking it.

No thrill or marked pulsation was observed in palpating the belly. Pulse 60, rather tense. No cardiac murmur. The patient stated that he had occasionally had similar attacks, but that they had never before been so severe. The hypodermic use of morphia allayed his suffering. The next day he had less pain, and rose, having taken, at his own request, a bottle of the solution of citrate of magnesia, which purged him gently.

On the morning of April 25, after a night of great suffering, he sank suddenly and died.

The diagnosis had not been made out. After his death, it was ascertained from his friends that he had suffered for some months pain in his belly, but had never given up work on account of it. He often spoke of having strained himself in lifting, and associated the pain with that fact. He had had malaria, and had, some few years ago, venereal sores, followed by a single suppurating bubo. There was no history of constitutional syphilis. Section *cadaveris* revealed at once the cause of death. The peritoneal cavity was filled with fresh blood-clots. This blood had escaped from a longitudinal rent in the wall of a sacculated aneurism of the abdominal aorta, situated opposite the lower dorsal and upper lumbar vertebræ, and between the crura of the diaphragm. The opening in the wall of the artery was about one inch and a quarter in length, and was opposite the twelfth dorsal vertebra; the tumor itself was three inches and three-fourths long and two inches wide, and was developed anteriorly and upward, so that a portion of the right pleura was adherent to its upper extremity. Its long diameter corresponded with the course of the aorta, and its middle point was opposite the eleventh dorsal vertebra. The trunk of the cardiac artery and the superior mesenteric were given off from the sac, which in its upper part was occupied by a moderately firm clot the size of a hen's egg. The heart was hypertrophied; there was some bloody serum in both pleural cavities. The remaining viscera were blanched from loss of blood, but otherwise healthy. As the aneurism was developed anteriorly, there was no erosion of the bodies of the vertebræ. Some old inflammatory adhesions existed between the peritoneal covering of the tumor and that of the stomach. No atheromatous patches were to be seen upon the thoracic aorta; the valves of the heart were normal. There were, however, to be observed near the seat of the aneurism small, faintly-marked patches, showing slight local change in the middle coat and in the deep layers of the inner coat of the aorta, —probably commencing atheroma.

It may be not without interest to the members of the Society to state that this specimen has been kept since April 25 in a solution of hydrate of chloral, gr. xii and f3i, as recommended by Dr. Keen. The preservation is in every way most excellent as to texture, color,

and the absence of any trace of the odor of decomposition.

Dr. H. LENOX HODGE exhibited *the head and neck of the femur, removed by excision,—the head found separated from the neck by ulceration*. The patient is a delicate, pale, emaciated lad, 7 years old. About four months ago he fell, but was able to walk about that day. The next day he was obliged to remain in bed. An abscess formed, and discharged behind the great trochanter. The limb became shortened, and the inclination of the pelvis very marked. The knee is partially ankylosed, but there was a remarkable degree of motion at the hip for a case of arthritis. Excision was done at the Children's Hospital, May 6, and the head of the femur was found entirely separated from the neck, and lying in a pocket in the gluteal muscles above the great trochanter. The neck pressed against the acetabulum, and in the excision was removed as usual below the trochanters. This separation of the head by ulceration is rare, and accounts for the unusual motion at the hip prior to the operation. The case is interesting also on account of the short period in which this extensive destruction of bone appears to have resulted.

Dr. J. E. MEARS inquired of the condition of the acetabulum. He thought it a question whether the force of the injury might not have been spent upon the neck of the femur, and thus have been the exciting cause of the inflammation.

Dr. HODGE replied that the acetabulum was sound, except at the lower part of the rim. He had no doubt but that the inflammation set in on account of the injury. The physician who first examined the case treated it throughout as a fracture.

Dr. JOHN ASHHURST, Jr., said that this case appeared to have been one of the variety which systematic writers called *femoral coxalgia*,—i.e., a case in which the disease originated in the extremity of the femur rather than in either the synovial membrane or the acetabulum. It was, he believed, in such cases that separation of the femoral head was most apt to occur, the destructive process affecting chiefly the neck of the bone, which was unprotected by cartilage; whereas in the form of hip-disease known as *articular coxalgia* the head of the femur might be almost completely disintegrated, while the remnant yet remained firmly attached to the shaft.

Dr. WHARTON SINKLER presented a specimen of *extensive atheroma of the circle of Willis and other cerebral arteries*. The patient from whom it was removed was a man 47 years of age, single, who for some years had been employed in the post-office as letter-carrier and clerk. For twelve years he had served in the British army in India, and during the late war he was in the United States army. He had always enjoyed good health, and was temperate in the use of tobacco and liquor. He had never suffered from any constitutional malady.

There was no cardiac disease, nor were there any atheromatous changes in the radials.

About three years ago he had an attack of left hemiplegia. The paralysis was not absolutely complete, he being able to move slightly the hand and foot, and in about six months was able to return to light work. He could walk fairly well at the end of this time, could use the arm to some extent, and there was no contraction of the flexors on the paralyzed side.

For several months he continued to improve. Once, however, he had an attack of vertigo, which was followed by an increase of weakness for a few days.

Rather more than a year after the first attack he had a second. He did not become unconscious, but he was extremely difficult to rouse. The face was flushed, the breathing stertorous, and the speech thick. He

complained of intense pain in the head. The loss of power was on the right side, but it was not so complete as it had been on the left side in the previous attack. There was no facial palsy. It was two or three months before the patient was able to walk even a few steps. The muscular power of the limbs seemed to have returned, but the difficulty was in co-ordination. The power of locomotion in time returned to some extent, but he was never able to walk any distance, even with assistance. His gait was uncertain, and if his attention was called to anything while he was walking he was apt to fall. In fact, there was a sort of choreic condition of the limbs which was induced when voluntary effort was made, and unless he carefully observed his movements he tottered or fell.

During the next few months he had several attacks of vertigo, followed by severe pain in the head, loss of appetite, and obstinate constipation. After these attacks there was always increased difficulty in walking. For several months before death the expulsive power of the bladder became weakened, and urination was often delayed many hours.

On May 7, 1874, while sitting on the commode and endeavoring to urinate, he suddenly fell forward unconscious. He was caught, however, before striking the floor. There were no convulsive movements, but the body became rigid and the eyes were rolled up. Consciousness returned in a few minutes, but on recovering he felt as if he were choking. He could not swallow, and respiration was labored. Speech was thick and almost inarticulate. For a few days before this he had been unusually heavy and inclined to sleep most of the time. In a few hours he was able to take into the stomach some liquids; but the next day the inability to swallow returned, and the respirations became more frequent and difficult. The bladder was emptied by the catheter, and the urine examined and found to be free from albumen.

His condition from this time grew steadily worse. The surface became congested from insufficient aeration of the blood, everything that was attempted to be swallowed was regurgitated through the nose and mouth, and the patient died on May 12.

There was no increase of paralysis in the extremities, and consciousness remained almost to the last.

Post mortem forty-eight hours after death. The body was in a good state of preservation, having been kept in ice. The veins of the scalp were full. The skull was brittle, a corner breaking off when the calvarium accidentally dropped on the floor. Dura mater not unusually congested. In the superior longitudinal sinus was a firm white clot extending almost its entire length. The arachnoid was opaque over its convexity, but was more especially so at the base. A white clot occupied the right internal carotid. The vessels of the circle of Willis were enlarged and extensively atheromatous. The right middle cerebral artery was almost double the normal size, and stiffened with atheromatous changes; the left was in very much the same condition, and in the under surface of the middle lobe, where the vessel rested, was a spot of softening the size of a pigeon's egg. On section of the brain, the puncta vasculosa were prominent and some serum exuded. There was a moderate amount of fluid in the ventricles. In the left corpus striatum was a patch of softening as large as a filbert. No change in the right. In the right crus cerebri was a small spot of softening, which presented a dark color with many almost black points. A fragment of this was kindly examined by Dr. Tyson, who found only pigmented cells and no hæmatoidin crystals. There were adhesions and recent lymph in the right pleura, and the base of the right lung was somewhat congested. The liver and kidneys were gorged with blood, but otherwise healthy.

MEDICAL SOCIETY OF THE COUNTY OF ALBANY, NEW YORK.

SEMI-MONTHLY MEETING, APRIL 8, 1874.

DR. WM. H. CRAIG, President *pro tem.*, in the chair.

DR. CHARLES DEVOL reported the following case of *abscess within the cranium, resulting from inflammation of the inner ear*:

R. H., æt. 34, Scotchman, mechanic, had been subject to frequent attacks of violent pain in the right ear for several years past. Ten days prior to death he had a severe attack, which demanded active treatment for its relief. The patient had violent chills, which came on at irregular intervals, followed by coma, for four days before death.

Excepting these attacks, he was seemingly healthy.

Autopsy, 24 hours after death. Rigor mortis marked. Body rather emaciated.

Encephalon.—Left hemisphere congested throughout; lateral ventricles distended with clear serum. The surface of the right hemisphere was covered with thick greenish-yellow pus, in quantities sufficient to compress it considerably. The base of the brain was not involved, nor did the inflammation extend much into the sulci. Gray matter on section of a greenish-brown tinge.

On the right side, between the dura mater and petrous portion of the temporal bone, was a small quantity of pus, limited to a space two inches in diameter. The dura mater was discolored, but not perforated. This communicated with the internal ear, which was filled with pus. The tympanum was destroyed.

Thorax.—Lungs normal, excepting hypostatic congestion. Old adhesions of pleural surface throughout the right side, extending to the diaphragm. Heart healthy. Pericardium contained three fluidounces of clear serum.

Abdomen.—Kidneys showed recent congestion, very marked; the blood oozing profusely on section, and the tissue of a dark-red color, otherwise healthy; spleen normal; liver somewhat enlarged, with rounded edges.

The other organs were in a normal state.

DR. DEVOL said that, if possible, a careful diagnosis should be made in diseases of the internal ear: cases with acute local pain, with delirium and chilliness, indicate participation of intracranial tissues in the disease. He recommended a careful examination of the meatus auditorius. If pus escaped, it might be from the internal ear. The bones may be carious, and the semicircular canal may be destroyed; and ulceration, inflammation, and suppuration may exist in the cranium, involving dura mater or brain, or both.

DR. VANDERVEER presented the pathological specimen of Dr. Devol's case, and exhibited that portion of the dura mater diseased by contact with pus. This disease of the ear was supposed to have existed for four years. There was entire destruction of the small bones of the ear, also of the semicircular canal. The mastoid cells were implicated.

DR. J. B. STONEHOUSE asked the experience of the Society,—whether they had noticed a preference for abscesses following otorrhœa on the right side of the cranium.

DR. E. H. DAVIS narrated the following cases:

He was consulted by a farmer, who complained of having taken cold in his left ear. There were earache, and tenderness, and swelling, with obstructed hearing. He prescribed remedies calculated to relieve, and did not hear from his patient for three or four weeks, when he was called to see him. The patient could not hear, and suffered much from pain back of the ear, which continued until suppuration took place and discharged freely. A portion of the temporal bone became detached

from the surrounding bones some weeks after. He lived for about four months after this; his appetite remained good, and he was comfortable a part of the time. The loose bone never exfoliated; the patient became comatose, and died. The disease was on the left side.

Another very similar case had since occurred in his practice, of inflammation and suppuration of the left ear preceded by moderate earache; the integuments inflamed; abscess formed, which, being incised, discharged freely; and large pieces of bone were exfoliated during the next two years, when he finally recovered, and his hearing was restored.

Dr. CHARLES DEVOL inquired how great a destruction of surface in case of burns was necessary to prove fatal.

Dr. JAMES S. BAILEY said that he had met with a great number of cases of burns in the Southern States, where it was not uncommon in clearing land, in burning brush, for negro women's dresses to take fire, and, before they could be extinguished, for them to be burned severely. He had also seen several fatal cases since living in Albany. According to his experience, in cases where one-eighth of the surface was burned, especially if upon the abdomen and chest, death had ensued. He detailed the case of a child who had died in twenty-four hours from shock; also a case of an adult, who had survived the shock, and seemingly had a good prospect for recovery, but died between the third and fourth month, from exhaustion. When asked the course of treatment pursued, he said he stimulated until reaction had taken place; then supported, and used externally carbolic acid, with glycerin and water.

Dr. DEVOL said that his patients, after being severely burned, had complained of feeling intensely cold, and asked the reason for this.

Dr. VANDERVEER attributed this to nervous shock. He then referred to the shock from surgical operations. He spoke of a case of amputation of the arm, when, in the absence of anæsthetics, he had operated, and the patient afterwards spoke of only the intense pain in cutting through the skin. When the large nerve-trunks were separated with the knife, it only caused a sudden nervous shock. He had used very successfully, as a local dressing for burns, a mixture of equal parts of lime-water and olive oil, with four drops of carbolic acid to the ounce, and had, in the latter stages, resorted to skin-grafting where large surfaces of the cuticle had been destroyed.

Dr. BALCH related a case, as coming under his observation during his service in the New York Hospital, of a man who fell in a vat, scalding both lower limbs below the knees. As an external dressing he had used Carron oil, pencilling the edges with a solution of nitrate of silver, and washing the limb occasionally with tepid water.

He had treated a similar accident during his service in the Brooklyn Hospital in the same manner; both recovered.

Dr. CURTIS said that he had seen the Lister's bandage used in a very extensive burn of the lower extremity, in the General Hospital at Vienna. This consisted of a paste containing carbolic acid, which was spread on tinfoil and the surface kept constantly covered with it. The large wound granulated evenly under this; the surface being painted once in two or three days with a rather weak solution of nitrate of silver.

In the case of a ballet-dancer whose body was so extensively burned that no hope of recovery was entertained, great relief was afforded by immersion of the body entirely under water,—the appliances for which are very perfect in Hebra's wards. This is the general treatment there in such cases.

Dr. DEVOL was well pleased with a mixture of glycerin, yolk of egg, and butter of cacao, equal parts: it was bland, and excluded the air effectually.

GLEANINGS FROM OUR EXCHANGES.

THE TREATMENT OF PHTHISIS BY THE PHOSPHATE OF LIME AND THE JUICE OF RAW MEAT (*The Lancet*, June 13, 1874).—Dr. Henry Blanc has found by extended experience that in severe cases of phthisis no remedies are more valuable than the juice of raw meat and the phosphate of lime, when they are administered in a form suitable to the patient and to the disease. The syrup of lacto-phosphate of lime is well tolerated at first, but after a while induces dyspepsia, nausea, and somnolence. The solution of chlorhydro-phosphate is not grateful to the patient, but it is well tolerated by those who overcome their dislike to the rough acid taste of the drug, and has given very good results. Under whatever form the phosphate of lime may be prescribed, it should *always* be taken at meals.

The meat-juice should be prepared in the following manner: A pound to a pound and a half of fresh beef, deprived of fat, bones, etc., is placed over a quick fire for a few minutes, in order to whiten and harden the external surface only; the piece of meat is then cut into two or three pieces corresponding to the size of the meat-press, and all the juice is extracted by the pressure of the powerful screw. The superficial coction is necessary to overcome the elasticity of the meat, which renders the extraction of the juice a very difficult matter unless more powerful machines be used than the simple one at present required. A pound and a half of good fresh meat gives a teacupful of juice. The juice should be prepared daily. This juice, having all the physical properties of raw meat, is easily digested, is well tolerated, and, served in the following manner, is always very grateful to the patient. The juice should be mixed with equal parts of tepid broth, made of bones, and flavored with salt and pepper, and to which tapioca, vermicelli, etc., can be added. Care, however, should be taken that the broth is never more than *tepid*, otherwise coagulation takes place, and the desired effect is not obtained.

The treatment of the consumptive patient by this method is the following: Early morning, warm milk (not boiled), with bread and butter, and, if the appetite be good, some fat bacon and eggs. At eleven or twelve o'clock, breakfast, before which a drachm of the syrup of triple phosphate should be taken; during the meal itself, a dose of the muriatic phosphate of lime, and half of the daily allowance of the raw meat juice in some broth. The meal should consist, according to appetite and digestive powers, of fish or poultry, or white meats, fresh vegetables, and a few glasses of good alcoholic wine. Dinner at six o'clock on the same principles; broth, with the remainder of the raw meat juice, and, instead of the triple phosphate, a dessert-spoonful of cod-liver oil can be taken with advantage after the meal, if the liver be not enlarged and fatty, and the digestion good. The muriatic solution, or wine of phosphate of lime, should also be taken during the dinner. At night, before retiring to rest, a cupful of warm fresh milk, diluted one-third with Vichy water.

No medicines whatsoever, beyond those mentioned, should be administered, unless some special indications or some urgent symptoms claim their use. Anodynes, narcotics, cough-mixtures, lozenges, blisters, inhalations, etc., are practically of no good, and but too often, by lessening the appetite or by irritating the patient, they increase the debility and hasten the fatal end. All hygienic rules—out-of-door exercise, abluion of the skin, etc.—should at the same time be carefully attended to. Under the influence of this treatment the appetite rapidly returns, the cough becomes less troublesome, the expectoration lessens, the night-sweats and all unfavorable symptoms decline and disappear, the patient gains flesh

and strength, and the confirmed and helpless invalid, with proper care and prudence, can enjoy life once more.

MISCELLANY.

"27th July, 1844.

"A FEW days ago Sir William Hamilton was struck with palsy, and, though he should survive, is practically gone. . . . He is an excellent, laborious, and learned man; a great sounder of intellectual depths. His learning, indeed, is vast, and was hourly amassing. An indistinct utterance, an awkward, bashful manner, with a look of apparent sullenness, and a taste for abstruse profundity, prevented his being practically a first-rate teacher or lecturer. The art of oral instruction seems singularly difficult. It is by no means implied in a complete command of the subject, even when this is joined to considerable power of speaking or of writing. A great lecturer, besides these, must be precise, yet not dry; lucid, but not superficial; animated, but not declamatory; and, above all other qualifications, he must be familiar with all the depths and shallows of his hearers' mind in reference to his language, and to the matter to be taught; so as to avoid the common and fatal error of pursuing his own thoughts, while they have no thoughts to pursue, and of driving or soaring, while they, if awake, are staring at him from the flat earth. No mistake is more usual than that of supposing that the power of acquiring and that of communicating knowledge is the same, and that the lecturer evincing the one must evince the other. And even knowledge is not all that a truly good lecturer has to teach. He has to teach the art of acquiring knowledge, the art of acquiring the habits and the powers of acquisition."—*Times and Gazette*, June 6, 1874.

ERBWURST.—It is stated that the Prussian government is building, at Mayence, a factory for the production of the famous military sausage. If the results are satisfactory, an establishment of the kind is to be erected for every *corps d'armée*. The works will be able to supply 55,000 men, and will contain steam flour-mills, bake-houses, slaughter-houses, etc., etc. The steam flour-mills will turn out 7000 cwt. of flour daily, and there is sufficient accommodation in the house, with its kneading-machines and continuous ovens, for manufacturing this quantity of flour into bread. The slaughter-house is large enough to slaughter and deliver, ready for manufacture into food, 170 oxen daily, or at least 1000 per week, to the prepared-food department, which, besides this, will manufacture prepared vegetables. Forage rations for the horses of an army of the size named will also be supplied by the works. The opening of the establishment is fixed for about the beginning of 1875.

It is stated that horses, dogs, etc., may be freed from the annoyance of flies by smearing them with a little

empyreumatic oil of juniper, using it especially on the ears and other more exposed portions.

PROFESSOR KUSSMAUL, of Freiburg, has been invited to succeed Professor Lebert, at Breslau, who is about to retire; but he has declined the invitation.

It is stated that the negotiations with Von Recklinghausen for Rokitsky's chair have been again broken off,—this time, it is believed, finally.

THE MILLENNIUM.—The *Scientific American* believes the time will come when ice will be made in all our large cities for a dollar a ton.

NOTES AND QUERIES.

DEATH FROM AN OVERDOSE OF HYDRATE OF CHLORAL.

TO THE EDITOR OF THE PHILADELPHIA MEDICAL TIMES:

DEAR SIR,—I enclose for you the following item, to be used if you desire:

Dr. I. J. Meals, of Mill Creek, Huntingdon County, Pennsylvania, died on the night of the 19th inst. from an overdose of chloral hydrate. He was in the habit of taking a portion of a solution he had prepared for his use at night to induce rest and sleep. Feeling badly, he took more than usual (the number of grains cannot be determined). He was so far restored that he was able to sit up and converse after about four hours of effort to restore him; but there was still a tendency to relapse into a stupor. He became suddenly worse, and died, seemingly from paralysis of the heart, within five hours.

Yours, very truly,

A. B. BRUENBAUGH.

HUNTINGDON, PENNA., June 26, 1874.

OFFICIAL LIST

OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U.S. ARMY, FROM JUNE 30 TO JULY 6, 1874, INCLUSIVE.

SIMONS, JAMES, SURGEON AND MEDICAL DIRECTOR.—Granted leave of absence for thirty days from 25th inst., on account of sickness. S. O. 100, Department of the Gulf, June 29, 1874.

FRANTZ, J. H., SURGEON.—Granted leave of absence for four months, on Surgeon's Certificate of Disability. S. O. 141, A. G. O., June 29, 1874.

BROWN, J. M., ASSISTANT-SURGEON.—To report in person to Commanding General, Military Division of the Atlantic, for assignment to duty. S. O. 144, A. G. O., July 2, 1874.

HUBBARD, V. B., ASSISTANT-SURGEON.—During temporary absence of Surgeon Simons, in addition to his other duties, to discharge those of Medical Director at these Headquarters. S. O. 100, c. s., Department of the Gulf.

KINSMAN, J. H., ASSISTANT-SURGEON.—Assigned to temporary duty at Fort Abercrombie, Dakota Territory. S. O. 136, Department of Dakota, June 29, 1874.

DE WITT, C., ASSISTANT-SURGEON.—Assigned to duty at Fort Macon, North Carolina. S. O. 103, c. s., Department of the South.

LAUDERDALE, J. V., ASSISTANT-SURGEON.—To report in person to Commanding General, Department of the Missouri, for assignment to duty. S. O. 144, c. s., A. G. O.

LORING, L. Y., ASSISTANT-SURGEON.—To report in person to Commanding General, Department of Arizona, for assignment to duty. S. O. 144, c. s., A. G. O.

WEISEL, D., ASSISTANT-SURGEON.—Granted leave of absence for twenty days. S. O. 103, Department of the South, June 29, 1874.

DICKSON, J. M., ASSISTANT-SURGEON.—Granted leave of absence for two months, with permission to apply for an extension of two months. S. O. 144, c. s., A. G. O.

HARVEY, P. F., ASSISTANT-SURGEON.—To report in person to Commanding General, Military Division of the Atlantic, for assignment to duty. S. O. 144, c. s., A. G. O.

SATURDAY, JULY 18, 1874.

ORIGINAL COMMUNICATIONS.

ANALYSIS OF ONE HUNDRED AND TWENTY-FIVE CONSECUTIVE CASES OF LABOR AT FULL TERM.

BY H. G. LANDIS, A.M., M.D.,

Niles, Ohio.

ONE of the first reflections which have occurred to me after a careful study of these cases is, that it is somewhat difficult to define exactly the term "normal labor." If any interference on the part of the accoucheur causes labor to lose its natural character, there should be a reduction in the number of labors usually reported as entirely natural. Thus, there seem to me to be two modes of interference of frequent applicability: prompt rupture of the membranes after complete dilatation of the os, without waiting for its spontaneous occurrence; and retraction of the anterior lip of the os even when not oedematous; neither of which is compatible with the accepted meaning of natural labor. I am firmly persuaded that attention to these two points often materially shortens the second stage even when the natural efforts are perfectly competent to accomplish the same ends, but in a somewhat longer time. There are other manœuvres of apparently little moment which can be frequently used to advantage: *e.g.*, when the foetal head is found to be imperfectly flexed during the last third of the first stage, and not making uniform pressure on the os, a little manipulation may change in a few moments what a half-dozen pains might have been otherwise required to accomplish. The time gained by such a trifling interference is no small object. Thus, assuming the case just stated, we may take at least a half-minute for the duration of each pain, interval between each pain five minutes, making a total of twenty-eight minutes. And yet this could not be called a normal labor if we accept, for instance, Meadow's definition. We should, perhaps, classify obstetrical operations, like surgical ones, into minor and capital. The intentional rupture of the membranes is as much of an operation often as opening an abscess or even tapping a hydrocele. To be brief, I have arranged these cases in three tables. Table I. contains forty-four cases in which labor progressed and terminated by the natural efforts without any interference, and presents the following data: 1, the number of the case in consecutive order; 2, the woman's age; 3, the number of her pregnancies (P meaning primipara); 4, the duration of the first, second, and third stages respectively; 5, the sex of the child; 6, its weight; 7, the presentation and position. Baudelocque's third and sixth positions seem to have fallen into deserved disrepute. Leishman's nomenclature is therefore substituted, in which the first and second positions of the vertex are the same as Baudelocque's, but the third and fourth correspond to

the fourth and fifth of the same author. Table II. presents the same data in sixty-seven cases in which labor terminated by the natural efforts, but in which there was more or less interference, sometimes demanded by inertia or some trifling complication, and sometimes made in an entirely natural labor. Table III. gives the same data in fourteen cases in which there was capital interference, and presents, also, the nature and cause for the artificial termination. The whole number may be summed up as follows: Twin cases 2; single births 123; presentations 127—*viz.*, breech 1, shoulder 1, vertex 125, of which 97 were in the first position, 22 in the second, 5 in the third, and 1 in the fourth. Of the children, sixty were males, and sixty-seven females, of which four males and one female were still-born. Of the mothers, ninety were multipara and thirty-five primipara. Their nativity was—American 43, Irish 40, Welsh 27, English 11, Scotch 2, German 1, Swede 1.

REMARKS.

One mode of interference to which I have alluded is not strictly orthodox, and needs explanation. When a labor has advanced so far that the posterior lip of the os has retreated, so to speak, beyond reach, the os may be said to be fully dilated. At the same time we will generally find the anterior lip of some length, and applied over the child's occiput, the head being normally engaged at the superior strait. So far as it does anything it certainly forms an obstacle to the descent of the occiput, if not to complete flexion of the head. If the membranes be now ruptured, the head will begin to descend with the same or succeeding pain: when it does not, I have been led to attribute the delay to the anterior lip, and have acted accordingly,—*viz.*, by placing two fingers under the edge of the lip, and endeavoring to slip or push it over the occiput. This procedure has frequently seemed to have been of great service, is very often feasible, and, when judiciously employed, harmless. I have twice resorted to Kristeller's plan of external pressure for inertia (Table II., Cases 99 and 114). In the latter case quinine and opium had each been used without effect; three pains assisted by pressure brought the head to the perineum, and delivery was then terminated without further assistance. External rotation was performed in Case 87, Table II. After complete dilatation, three poor pains brought the head nearly to the perineum. Although the pains improved in strength and frequency, there was no further advance for one hour and twenty minutes. *Diagnosis.*—Shoulders placed antero-posteriorly at the brim. With the next pain I rotated the shoulders by external manipulation; the head at once descended on the perineum, and was delivered by the succeeding pain. There were six cases of occipito-posterior positions. In three the occiput was born posteriorly: in two of these the pelvis was sufficiently roomy to allow of the easy passage of the head without anterior rotation; in the third the disproportion was too great to allow of this rotation by any means. In the other three cases there was

anterior rotation, and the occiput was brought under the pubes, twice spontaneously, and in one (Case 89) the head rotated in the blades of the forceps. At another time I hope to be able to present a careful study of this remarkable process of rotation while in the grasp of the forceps.

But one case in the series was followed by death (Table III., Case 7). An irregular practitioner had attended the woman, and repeatedly endeavored to apply instruments. I was called in consultation, and delivered the child, but, not feeling willing to be held responsible for the result of his previous manipulation, relinquished the case, which subsequently died of pelvic cellulitis and peritonitis. There were but two cases of hemorrhage, both post-partum and dependent on malarial poisoning; and in one of these ergot was given for the only time in the series. These three cases are the only ones in which recovery was not prompt and satisfactory.

Averages are deceitful, except from large figures. Nevertheless, so-called "meddlesome midwifery" can extract some comfort from these statistics. The average duration of the second stage in Table I. was 51.25 min.; in Table II., 55.34 min.; a difference of only 4.09 minutes. In many cases interference was postponed until a considerable lapse of time had suggested its necessity. Inertia, the great lengthener of labor, was present in a majority; there was an excess of 13 per cent. in the number of primiparæ, so that the aid attempted to be offered must have been of some avail. The still-births (all in Table III.) demand some explanation. No. 21 was originally attended by a midwife, who neglected to tie the cord after the first birth. There being but one placenta, or rather two intimately joined, the second bled to death before medical aid was summoned. Nos. 26 and 86 presented the alternative of craniotomy or such forcible compression by the forceps as inevitably to destroy life. No. 48 is the only case in which there could be any doubt as to the necessity of the amount of pressure employed. No. 67 is sufficiently interesting to be given in detail. Labor began July 7, in the evening. Dr. L. A. Bard was summoned, and found the os fully dilated after only two hours of labor. The pains had ceased, and were not renewed until the next evening. By 12 P.M. the head had descended into the excavation, when convulsions set in. Dr. B. at once bled her freely, which stopped the convulsions, and sent for me. I arrived at 1 A.M., and did not anticipate any difficulty after an examination. While warming the forceps the convulsions reappeared, and ether was at once administered and the forceps applied. Vigorous traction for half an hour was required before the head was delivered; after which the neck was found to be stretched, and the shoulders "stuck" at the brim, antero-posteriorly. With considerable exertion we managed to hook down the right or posterior shoulder, and finally to extract the child. There was no return of the convulsions, and she made a good recovery. I have since arrived at the conclusion that the arrest of the head just above the inferior strait after an easy descent so far, and its continuance there despite good pains, is diagnostic of delay of

the shoulders above the brim. As in a case already cited, I have no doubt that external manipulation will generally suffice to rotate the shoulders into a wider pelvic diameter.

Table I.—Delivery by Natural Efforts without Interference.

No. of Case.	Age.	No. of Pregnancy.	DURATION OF STAGES.			CHILD.				Remarks.
			First. h. m.	Sec'd. h. m.	Third m.	Sex.	Weight.	Presentation.	Position.	
3	22	P	12	1	10	M.	7½	V.	1	
4	35	P	3	30	10	M.	10	V.	1	
5	20	P	7	1.15	5	F.	7	V.	1	
6	25	P	2	2	10	F.	7	V.	1	
9	26	2	5.20	20	10	F.	5½	V.	1	
15	19	2	3	5	10	F.	7	V.	1	
18	25	3	4	1	8	F.	6	V.	1	
19	30	3	3	1.15	10	M.	10	V.	3	No anterior rotation. Perineum rigid.
20	23	4	4	15	13	M.	9	V.	1	
22	33	10	3	4.30	6	M.	9	V.	1	
24	28	5	10	30	10	M.	10	V.	2	
33	28	5	1	1.30	10	F.	7	V.	1	
34	30	2	26	2.30	5	F.	10	V.	1	
35	27	3	10.30	35	15	M.	8	V.	1	
38	30	3	4	30	15	F.	6	V.	1	
40	30	5	5	1	20	F.	8	V.	1	
41	30	10	1	1	20	F.	8	V.	1	
44	23	P	1.45	5	8	F.	6	V.	1	
49	40	7	5	30	15	M.	8½	V.	1	
51	23	2	9.30	30	35	M.	9	V.	1	
52	25	6	4	30	35	M.	5	V.	1	
55	25	2	6	30	20	F.	7	V.	3	No anterior rotation.
57	26	2	2.50	2	5	M.	8	V.	1	
58	28	4	4	1.35	10	M.	9	V.	1	
65	21	P	4	1.30	10	M.	9	V.	2	
72	23	P	3.10	2.40	12	M.	6	V.	1	
74	22	2	3.10	20	4	F.	9	V.	1	
79	28	6	3.45	15	10	F.	7	V.	1	
80	30	5	5	30	15	F.	7	V.	1	
85	18	P	9	1.30	5	M.	8	V.	1	
92	31	5	2	45	15	M.	5	V.	1	
94	25	3	2	30	5	M.	7½	V.	2	
97	30	6	1.45	30	5	F.	9	V.	1	
98	22	2	2.20	45	10	M.	9	V.	1	
101	20	2	2	45	6	M.	10	V.	1	
104	19	2	6.30	1	5	F.	10½	V.	2	
105	42	10	2.15	1.10	10	F.	11	V.	1	
107	25	2	1.30	30	15	F.	7	V.	1	
109	35	10	45	20	6	F.	9	V.	1	
110	24	2	4.30	20	10	M.	8	V.	1	
118	19	P	3.30	40	10	M.	6	V.	1	
119	30	5	16	30	10	F.	6	V.	1	
120	22	2	4	1.10	8	M.	9	V.	1	
121	34	4	2	40	6	F.	10	V.	2	

Table II.—Delivery by Natural Efforts after Interference.

No. of Case.	Age.	No. of Pregnancy.	DURATION OF STAGES.			CHILD.				Remarks.
			First. h. m.	Sec'd. h. m.	Third m.	Sex.	Weight.	Presentation.	Position.	
1	35	7	12	15	10	M.	6	V.	1	
8	33	5	4	2	5	F.	8	V.	1	
10	21	P	36	1	12	F.	9	V.	1	
11	20	P	24	1.55	10	F.	8½	V.	1	
12	30	7	3	30	15	M.	8	V.	2	
13	27	2	2.30	25	8	M.	8	V.	1	
14	28	2	6	1.25	10	F.	7	V.	1	
16	32	7	4.30	1	8	F.	6	V.	1	
17	27	3	2.45	15	13	F.	7	V.	2	
25	25	3	5	55	7	F.	10	V.	1	
27	17	P	4.30	1.15	15	M.	6	V.	1	Very thick membranes. Labor during remittent fever.

Table II.—continued.

No. of Case.	Age.	No. of Pregnancy.	DURATION OF STAGES.			CHILD.			Remarks.	No. of Case.	Age.	No. of Pregnancy.	DURATION OF STAGES.			CHILD.			Remarks.		
			First. h. m.	Sec'd. h. m.	Third. m.	Sex.	Weight.	Presentation.					Position.	First. h. m.	Sec'd. h. m.	Third. m.	Sex.	Weight.		Presentation.	Position.
28	38	5	2	5	10	M.	9	V.	I	Adherent membranes.	81	30	7	22	15	5	F.	7	V.	I	Flexion by manipulation. External rotation of shoulders. Fainted once.
29	32	5	2	30	45	F.	9	V.	I		82	22	3	3.10	10	5	M.	10 $\frac{1}{4}$	V.	I	
30	33	3	3.20	10	15	F.	9 $\frac{1}{2}$	V.	I		84	24	10	6.15	30	10	F.	9	V.	I	
31	21	P	10	30	10	M.	8 $\frac{1}{2}$	V.	I		87	27	8	4	1.45	5	M.	9	V.	I	
32	21	P	6	1	10	F.	10	V.	I		88	22	P	7	2.45	10	F.	8	V.	I	
36	31	5	9	5	8	F.	7	V.	I		90	26	3	7.45	25	5	F.	10 $\frac{1}{2}$	V.	I	
37	21	P	10	45	10	F.	7	V.	I		91	17	P	1	1	10	M.	7 $\frac{1}{2}$	V.	I	
39	25	6	1.45	15	5	M.	7	V.	I		93	38	6	3.15	40	5	F.	9	V.	I	
42	24	P	12	1.5	10	M.	7	V.	2		95	23	2	8.15	15	10	M.	8	V.	I	
43	17	P	24	1.5	7	F.	7	V.	I		96	28	P	4	2.25	6	F.	8	V.	I	
45	23	P	24	1.30	10	M.	10	V.	I	Placental vacuum.	99	30	4	7.10	45	10	F.	7	V.	I	External pressure for inertia.
46	25	P	8	3	15	M.	9	V.	I		100	22	4	4	5	5	F.	7	V.	I	
47	30	4	14	1	10	M.	7	V.	I		102	26	3	4.30	15	5	M.	6 $\frac{1}{2}$	V.	I	
50	22	2	5	75!	5	M.	11	V.	I		106	26	4	10.15	20	4	F.	9	V.	I	
53	38	10	11	20	5	M.	7	V.	I		108	25	P	16.30	1.45	10	M.	9 $\frac{1}{2}$	V.	I	
54	30	6	3	35	8	M.	7	V.	I		111	16	21	10.15	1.45	10	F.	8	V.	I	
56	17	P	4.30	1.20	5	F.	6	V.	I		112	32	7	7	20	5	F.	8	V.	I	
59	25	3	5	20	10	F.	6	V.	I		113	27	3	11	35	7	M.	7	V.	I	
60	21	P	4.20	1.10	10	M.	9	V.	I		114	44	10	4	3	5	M.	10 $\frac{1}{4}$	V.	I	
61	21	P	8	1.10	8	F.	6	V.	I		115	35	7	2.5	25	5	F.	7	V.	I	
62	27	3	6	1.30	7	M.	7	V.	I	116	19	P	3.50	2.10	10	F.	6 $\frac{1}{2}$	V.	I		
63	40	14	3	15	22	F.	5	V.	2	117	20	P	4.45	2.40	8	F.	9 $\frac{1}{2}$	V.	I		
64	24	2	5	30	10	M.	7	V.	I	Almost painless first stage. External pressure for inertia. Rigid perineum. Bi-parietal diam. four and a half inches.	123	28	7	4	13	6	F.	8	V.	I	Anterior rotation.
66	23	3	1.45	5	5	F.	9	V.	I		124	29	6	7	30	5	F.	8 $\frac{1}{2}$	V.	I	
68	18	P	8.15	1	11	M.	6	V.	I		125	17	P	19	1.15	10	F.	8	V.	I	
70	38	8	16	10	5	F.	8	V.	I												
71	26	4	4	15	5	M.	7 $\frac{1}{2}$	V.	I												
73	21	3	5	30	6	F.	8	V.	I												
75	28	4	6	15	5	M.	10	V.	I												
76	20	2	12	1.45	5	F.	6	V.	I												
77	19	2	2	50	10	F.	7	V.	I												

Table III.—Delivery by Capital Interference.

No. of Case.	Age.	No. of Pregnancy.	DURATION OF STAGES.			CHILD.				Character of interference.	Cause.	Remarks.
			First. h. m.	Sec'd. h. m.	Third m.	Sex.	Weight.	Presentation.	Position.			
2	18	P.	7	4	6	M.	7	V.	1	Forceps.	Rigidity of soft parts.	Still-born.
7	40	5	10	6?	10	M.	8	V.	2	Forceps at sup. strait.	Obliquely distorted pelvis.	
21	25	3	24	2 3.30	5	F.	6 M. 6½	Breech. Shldr.	1	None.	Malposition.	
23	22	P.	12	2.15	12	F.	8	V.	2	Version.	Rigidity of soft parts.	Still-born.
26	35	12	43	3.30	5	M.	12	V.	3	Forceps.	Small conjugate diameter, occipito-posterior position, large head.	
48	29	2	12	2.15	10	M.	10	V.	2	Forceps at sup. strait.	Obliquely distorted pelvis.	
67	19	P.	2	30	15	F.	11	V.	2	Forceps and bleeding.	Child's shoulders caught at superior strait, and convulsions.	Still-born.
69	35	8	24	9.30	5	M.	9	V.	2	Forceps at sup. strait.	Obliquely distorted pelvis.	
78	23	3	12	2.15	10	M.	11	V.	1	Forceps at sup. strait.	Large head, no flexion.	
83	33	P.	6.15	3.20	15	F.	9	V.	1	Forceps.	Stiff sacro-coccygeal joint.	Still-born.
86	21	P.	10	6	10	M.	10¾	V.	1	Forceps at sup. strait.	Disproportion, large head.	
89	25	2	10.15	2.20	6	M.	10	V.	3	Forceps in excavation.	To aid rotation and save time.	
103	30	P.	4	2.40	5	F.	7	V.	1	Forceps and ether.	Convulsions in second stage labor.	
122	35	5	18	5.10	10	M.	7	V.	1	Forceps at sup. strait.	Uterine inertia.	

DESCRIPTION OF A SPECIMEN OF LUPUS VULGARIS.

Read before the Pathological Society of Philadelphia, May 14, 1874.

BY LOUIS A. DUHRING, M.D.,

Clinical Lecturer upon Diseases of the Skin in the University of Pennsylvania, and Physician to the Dispensary for Skin-Diseases, Philadelphia.

THE specimen which I present for examination was taken from a patient suffering with lupus vulgaris, who at the present time is under my care. He is an Irishman, 26 years of age, and has been the subject of the disease for fourteen years. An oval-shaped, superficial ulcer, the size of an almond, existed upon the back of the wrist, from the centre of which an island of tissue was seen projecting. This piece of unhealthy-looking skin, not larger than a small split-pea, and which had not been there more than a month when first seen by me, was excised with a scalpel. Examined at once with the naked eye, it was found to be soft, gelatinous, and too tender to handle. It contained very little blood, and was pale in color, as though it had been soaked in water. It was immediately placed in a one-fourth per cent. solution of chromic acid, and allowed to remain there three days, when it was transferred to strong alcohol for a few hours, and in this manner prepared for examination. The small fragment was entirely disposed of into thin sections which were variously treated with glycerin, carmine solution, oil of cloves, and oil of turpentine. A large number of the sections were studied, all of them affording similar results.

Under a low power, 60 diameters, the tissue is seen to consist of a very thin layer of hard, horn-like epidermis, remarkable for its imperfect development as well as for the extreme paucity of its cells. Immediately beneath this stratum, which may be likened to an enveloping membrane, is found the rete Malpighii, very highly organized, and unusually distinct in outline, dipping down between the papillæ of the corium. The papillary layer is next encountered, and is seen to be clearly defined against the rete. The papillæ are prominent, and unusually large. The corium itself is totally altered in structure, the connective tissue being almost completely obliterated and supplanted by a mass of fine "granular matter," invading every part of the corium. With the power of 60 diameters this structure bears a resemblance to the spores of certain fungi, particularly those of the *Trichophyton*, which refract light in such a brilliant manner.

Here and there throughout the corium are seen lumina, varying in shape and size, but without defined border, and which manifestly result from an absence or loss of the "granular matter" referred to. This condition is everywhere noticed, in the papillæ themselves as well as farther down in the corium. A few transversely cut fine hairs are observed in some of the specimens. Gland-structure is not noticed. Such are the features recognizable with a low power. With a higher power, 500 diameters, certain points appear which may be mentioned as follows. The rete cells are noticeably large and well defined in outline, possessing the rounded

nucleus and angular-formed nucleolus with more than ordinary clearness. Their borders exhibit the prickles very plainly. The rete shows a prolific and rapid growth of cells, similar to that which is seen in other speedy pathological changes which take place in the skin, as in herpes, for instance.

The "granular matter" spoken of when viewing the specimen under a low power is now seen to be made up of a multitude of small cells, which are closely packed together, either free or imbedded in a delicate mesh-work. These are of various shapes, some being rounded, others angular or polygonal, and others oval; in fact, they vary greatly as to outline. They also are different as to size; some being relatively very large, and others very small. Some are found to be similar in size to the red blood-corpuscles, while others, the vast majority, are very much smaller. They refract light in a marked degree. Their contents show various stages of change; some of them containing fine granular matter, with a few prominent black points in their centre, while others show a tendency to further disorganization and rupture. These cells, which form the bulk of the tissue, are very numerous, and appear to invade every portion of the corium, from the apices of the papillæ downwards; they are quite evenly disseminated throughout the structure, and show no tendency to aggregate or grow about a centre. At the same time, they are found in larger numbers at some points than at others,—this being accounted for, I think, by there being a more rapid and luxuriant growth at this point on account of some variation in the original connective tissue. The cells are not adherent one to the other, but appear as separate bodies, lying close to one another. The lumina referred to, represent points where disintegration and destruction of tissue, both of the original connective tissue as well as of the new formation, have taken place. About the borders of these cavities, shreds of connective tissue are seen, but they are scanty in number, imperfectly developed, and everywhere studded with the new formation cells. Although the mass of the corium appears to consist of these cells without much of a stroma, yet upon more accurate examination it is observed that a fine, delicate mesh serves as a bed for most of them, although they are often not firmly seated in it.

The case is an interesting one, from the fact of its being a very recent formation of lupus. It is a young specimen of the disease, showing the process in its early stage, and differs in this respect from the specimens usually obtained, which are apt to be of long standing, and show a somewhat different picture, particularly as regards the rete Malpighii.

The numerous cells infiltrating the corium comprise the chief interest which attaches itself to the specimen, and these seem to agree with the observations of Virchow, Auspitz, Neumann, and others. Rindfleisch, however, takes an entirely different view of the subject, considering lupus as an adenoma of the sebaceous glands, and placing it in close proximity to the epithelial growths. This latter view is so at variance with the one commonly

accepted that at present it is merely mentioned. Hebra, Virchow, and others agree in placing lupus with the neoplasms, grouping it with elephantiasis græcorum and syphilis. Virchow considers these three diseases under the head of "granulation" tumors or growths, and adds that they consist of a decaying tissue very prolific in cells, which is rich in cells just in proportion to the degree of its pronounced character; and that the greater the number of cells it contains the smaller and less highly developed they are found to be. According to the same author, the lupus mass is made up of a collection of young, very soft, granulation-like tissue, generally abounding in vessels, which hold, as a rule, small round cells, resembling at times the cells of the rete Malpighii so much as to be difficult of diagnosis. This view corresponds in part with the examination of our case; but that the lupus cells resemble the rete cells so much as to be scarcely distinguishable the one from the other, is a statement which is by no means borne out by our investigation. The line of demarcation between rete and corium was well marked and distinct, so much so as to have been worthy of note in the report. In this connection, however, the variety of lupus, as well as the stage of the disease, whether recent or old, must be taken into consideration, for these are points which it seems to me are sufficient to render different pictures in this portion of the structure. From these few remarks it will be seen that in the main our examination is corroborated by the elaborate studies of both Virchow and Auspitz upon the pathology of this disease.

TRANSLATIONS.

A NEW METHOD FOR THE ENUMERATION OF RED AND WHITE BLOOD-CORPUSCLES.—M. L. Malassez has communicated to the *Archives de Physiologie*, January, 1874, a method of counting blood-globules, together with an account of certain apparatus devised by himself for the purpose. The process has found great favor among European physiologists, and has been made use of in several recent researches. The apparatus used by M. Malassez is described minutely in the communication referred to, but we have only space to give a few particulars regarding it.

For the purpose of examination the blood is diluted with an artificial serum, composed of one vol. of a solution of gum arabic of specific gravity 1020, and three vols. of a solution of equal parts of sulphate and chloride of sodium, also of specific gravity 1020. The pipette, of a peculiar construction, called the "mixer," in which the blood and artificial serum may be mingled in any desired proportion with great accuracy, is figured and described at length by M. Malassez. For examination under the microscope a capillary tube of known volume is soldered to a glass slide, and by the aid of an eye-piece micrometer of peculiar construction, also devised by M. Malassez and described by him in the same number of the *Archives*, the number of globules to a given volume of blood is rapidly and accurately estimated. In ascertaining the proportion of red globules the blood is mixed with artificial serum in the ratio of 1 to 100 or to 200, but in the case of the white globules the ratio of blood to serum is as 1 to 50. It is in estimating the latter that M. M.'s method more espe-

cially shows greater accuracy than those formerly in use. He concludes his paper by a series of experiments on the blood in different pathological conditions, followed out by the aid of the above-mentioned apparatus and according to the process described.

A. V. H.

RHYTHMIC MOVEMENTS OF THE VENA CAVA.—At a recent séance of the Académie de Médecine (reported in *L'Abeille Méd.*, May 11, p. 180) Dr. Colin read a paper on this subject, going to show the possession of decided contractility on the part of these vessels near the point at which they open into the auricle; a contractility manifesting itself in rhythmical movements which are sustained even after destruction of the bulb (medulla oblongata?) if the circulation be kept up by artificial respiration. These pulsatory movements have a perfect systole and diastole, and are isochronous with those of the heart.

Dr. Colin's paper was criticised by M. Vulpian, who remarked that the ideas were not new, as it has long been known that a contraction of the vena cava precedes by an instant that of the auricle. M. Bouilland drew attention to a paper by himself, read about a year ago, in which he had demonstrated the existence of rhythmical movements in the vena cava of frogs, though he had not observed them in the higher animals. The subject of Dr. Colin's paper was referred to a committee, but that gentleman subsequently remarked that he thought M. Vulpian must be mistaken if he imagined that he had observed these movements to be of a vermicular character. Dr. C. had invariably noticed in his experiments that the contraction operated along the entire length of the sinus of the vena cava at the same time that contraction of the auricles took place. M. Vulpian's error probably arose from his having employed agonized animals.

To this M. Vulpian replied that his experiments had not been made on agonized animals, but on those in whom artificial respiration had been conveniently and carefully sustained.

ATROPHY OF THE TESTICLES FOLLOWING THE USE OF LARGE DOSES OF IODIDE OF POTASSIUM.—The *Gaz. Méd. de Paris*, May 23, p. 269, quotes from the *Pabellou Medico* the following case coming under the notice of Dr. Juan Lomon:

A man of 27 had suffered from various manifestations of syphilis, among others, orchitis and pharyngeal ulcerations. Under the influence of judicious medication by means of iodide of potassium and mercury, all signs of disease disappeared. About a year later, however, some ulceration appeared on the pharynx, and the patient, taking the case into his own hands, dosed himself with large quantities of the iodide. The ulcers were finally healed, but a twelvemonth later he requested Dr. L. to examine his testicles. The right, on inspection, was found to have disappeared; the left was about the size of an almond. Coition was accompanied by pain, erection taking place slowly and lasting a long time. The duration of the venereal act was much prolonged, and no emission of semen took place.

TEST FOR DIGITALIS.—Bonner states that the best test for digitalis is Pettenkofer's reaction with the biliary acids. The smallest trace of digitalis dissolved in water may be detected by the addition, in the first place, of a watery solution of dried bile, and then of sulphuric acid. On warming the fluid to about 160° F., it assumes a peculiar red tint. If the addition of the sulphuric acid be so made that it does not mix with the solution, a red zone appears, which gradually spreads through the whole mass.—*Pharm. Zeitung*, 1873.

PHILADELPHIA MEDICAL TIMES.

A WEEKLY JOURNAL OF

MEDICAL AND SURGICAL SCIENCE.

The Philadelphia Medical Times is an independent journal, devoted to no ends or interests whatever but those common to all who cultivate the science of medicine. Its columns are open to all those who wish to express their views on any subject coming within its legitimate sphere.

We invite contributions, reports of cases, notes and queries, medical news, and whatever may tend to increase the value of our pages.

All communications must bear the name of the sender (whether the name is to be published or not), and should be addressed to Editor Philadelphia Medical Times, care of the Publishers.

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EDITORIAL.

WHITHER ARE WE DRIFTING?

IN times that are past, the American medical profession was dignified as well as honorable; its leaders men of decorum, whose example was as a bright and shining light that guided the rank and file of the profession in paths of quietness; its code of ethics the reflection of a professional public opinion that bound men together into a united body, leaving a wide gulf between the doctor and the quack. But in the whirlpool of the present decade, the whirlpool whose vortex was the crash of last September and whose eddy is the general stagnation of to-day, the profession at first sight seems to have been swept away from its old moorings,—its reputed leaders joining the mad dance of Mammon, and bartering for gold that professional honor and repute which were formerly valued so highly, or else with dazzled vision mistaking notoriety for fame, and rushing blindly along the paths of the empiric, until medicine and quackery appear to be fusing into one.

Our own city was formerly the very centre of professional dignity,—over-weighted, it may have been, with an excess of that truly valuable but now despised commodity. But what do we see in the present?—newspaper-fame sought after with the greediest avidity by men of the highest position; the college lecture-room turned into an exhibition-room for the juggler, amidst the plaudits of a class only too glad to have their hour of study replaced by the low performance of a variety theatre; grave

professors demeaning themselves to become an appendage of itinerant showmen and performers, playing with them the game of “you tickle me, Tom, I’ll tickle you, Harry,” in the race for advertisement. Frantic, however, as are our struggles, we are ignominiously baffled and beaten by our competitors of a sister city, who, with a genius rivalling that of Paracelsus, ride one sensation after another. As the dog-days approach, the annual cry of “mad dog” affords the opportunity always watched for, and most vehemently has it been embraced.

The particulars of McCormick’s case are, we doubt not, well known to all our readers, certainly so to every one who scans the New York dailies. Although the case at most is only one of hydrophobia, the city is thrown into a turmoil; columns of the newspapers are occupied with the discussions; one day we are told that the great Prof. — is to be at the inquest with his microscope; then that he has been there; then that he has made a wonderful discovery—has laid bare the *fons et origo mali*; and the scientific world is called upon to fall down before him, and to rise to shout hosannas as his triumphal car passes by. The truth seems to be that Prof. — has really done nothing worthy of comment,—done nothing and said nothing which has not been done and said at least as well years before, at home and abroad. A day or two afterwards, a modest card appears, disclaiming the high honors awarded; but has any one a doubt as to who furnished the illustrative diagrams and who inspired the *Tribune* articles? To convert this disgraceful race for notoriety into a comedy only one thing was lacking, and that deficiency was soon supplied. Another professor, not desiring to be completely outshone, taking on himself the duty of a detective, hunts up the dog that bit McCormick, and finds that he was not mad. Here the assistant of the first professor—like master like man—comes on the stage, and, carrying out the search a little further, announces that the dog was certainly not mad, and startles the city reporters and editors with the astounding discovery that any dog, sane or insane, may cause rabies in man by the poison of his bite.

All this may be very funny to read about, but viewed from the old stand-point it is more disgraceful than it is funny. And when the prominent position occupied by these medical Barnums is remembered, certainly the question which heads this editorial will arise in the mind of almost every one. If any, however, will take the trouble to look, we think that he will find that the same names appear over and over again; that really but a few men have seemingly cast aside all the traditions of

the fathers, and that there are still very many physicians, ay, even the great bulk of our leaders, honorable as our fathers would have judged, and wearing robes of unspotted purity. We think, however, that the time has come for a decision as to what the future shall be: whether, adopting the arts of the empiric and of the business-man, the profession shall descend from the position it has hitherto arrogated to itself, or whether it shall bear aloft the old standards of a faith and a practice above that of other walks of life. If the latter is not deemed desirable, by all means let the code of ethics be repealed and the whole profession put on the one footing; but if it is deemed desirable, let the code be enforced.

It may be that these various traps to catch the glitter of notoriety are set so deftly that they are not actual infringements of the code, and no medical society can reach their owners. But there is in every man's breast a longing for respect: even the veriest quack quails in his heart before his own image. If the medical press were always sufficiently independent to raise its voice; if medical public opinion were strong enough and bold enough; if, shunned at societies and avoided in the consulting-room by the individual members of the profession, these medical knights of the daily press felt the loss of respect among their medical brethren; if the records of the lecture-room revealed the damage to the professional standing of the professors,—then these gentlemen would of necessity either pass from one step to another on to open quackery, or, more probably, confine themselves to the legitimate means of obtaining practice.

THE quarrel of *The Clinic* with a British journal seems to have turned the brain of its editor: at least such is the only explanation that suggests itself to us of the following paragraph:

"The *Philadelphia Times* is engaged in a very small business when it throws the whole odium of failure of our national association upon Western men and Western cities. The *Times*, we are sorry to see, feels it necessary to fawningly apologize to Europe by grossly insulting its own country."

All that we said was that the body was not representative of the whole country, and that the larger portion of the best medical profession in America was located in our Eastern cities,—two truisms which could never have excited the ire of any one who was not occupying the position of the Irishman at the fair, who, shillalah in hand, paraded with the request, "Will somebody be plased to tread on my coat-tails?"

THERE are said to be now in Germany eighty-two cremation societies, in as many cities. A furnace, invented by Profs. Reclam and Siemens, of Berlin, is stated to have reduced, at the recent trial, two hundred-weight of animal carcass to white ashes in about an hour and a half, at a cost of three shillings for fuel. Dr. Steinmetz, of Württemberg, has proposed a new method of disposing of the dead. The corpse is to be placed in a trough made of cement, and covered up completely with liquid cement. The cement soon hardens, and, absorbing all moisture from the body, converts it into a preservable mummy at small expense and trouble. As soon as the cement hardens, the square coffins may be piled one upon the other like blocks of stone.

CAREFULLY-EXECUTED casts of the fractured humerus by which the body of Dr. Livingstone was recognized are to be placed in the museums of the Royal College of Surgeons, England, the Royal College of Surgeons, Edinburgh, and King's College, London.

ACCORDING to a law recently passed in Parliament, the question of pregnancy in a woman on trial for murder is no longer to be decided by a jury of matrons, but by competent medical authority.

PROCEEDINGS OF SOCIETIES.

BIOLOGICAL AND MICROSCOPICAL SECTION OF THE ACADEMY OF NATURAL SCIENCES.

JUNE 1, 1874.

DIRECTOR W. S. W. RUSCHENBERGER, M.D., in the chair.

DR. JOSEPH G. RICHARDSON read a paper on "The Value of High Powers in the Diagnosis of Blood-Stains," of which the following is a brief abstract: Observations of the writer, published five years since, have been apparently overlooked by recent authorities, notably Prof. A. S. Taylor, of London, in the new edition of his *Medical Jurisprudence*, so that further investigations seem necessary. The *a priori* arguments against the value of the microscopic test for distinguishing human blood from that of the ox, pig, sheep, horse, and goat, are—1, that the differences between the average size of their corpuscles are too minute to depend upon in a case of life and death; but this objection, valid as regards feebly magnified blood-disks, becomes void when these bodies are amplified 3700 diameters, on the same principle that a twelve-inch shell would never be mistaken for a six-inch shell, even by a careless person who would call a No. 1 a No. 5 shot; 2, it is urged that variations in the size of individual blood-corpuscles are too great and irregular, and too difficult to measure accurately, to render averages reliable; but according to the author's experiments

(especially one in which seven human red blood-disks whose mean diameter had been accurately determined by Prof. Theodore G. Wormley, in Columbus, Ohio, at $\frac{3}{32}$ of an inch, were computed here in Philadelphia to average $\frac{3}{64}$, or only $\frac{3}{32}$ of an inch less than their actual magnitude) this statement is incorrect; and 3, Virchow, Brücke, and their followers think that "a man's life should not be put in question on the uncertain calculation of a blood-corpuscle's ratio of contraction by drying," although a little consideration will show that this is not a fair statement of the point at issue, because, all the blood-disks likely to be mistaken for those of man being normally smaller, instead of *contracting* they would have to *expand* in order to become confounded with those of human blood; and as this expansion does not occur, the only mistake in diagnosis liable to take place is that we might possibly suppose that beef's blood was present when man's blood had actually been shed, so that at the worst we might contribute to a criminal's escape, but *never* to the punishment of a guilty person. To furnish a positive demonstration of the facts of the case, however, the writer obtained from each of his friends Prof. J. J. Reese and Dr. S. Weir Mitchell three specimens of blood-clot from the veins of a man, an ox, and a sheep, selected without his knowledge, and so marked as to furnish no clue as to which animal they were derived from. By the microscopical characters alone he was able to determine with perfect correctness the origin of every one of the six samples; the corpuscles of the human blood chosen by Dr. Mitchell, for instance, averaging $\frac{3}{64}$, with a maximum of $\frac{1}{16}$ and a minimum of $\frac{3}{128}$ of an inch; those of the ox-blood giving a mean measurement of $\frac{1}{16}$, with a maximum of $\frac{1}{8}$ and a minimum of $\frac{1}{32}$; whilst those of the sheep's blood afforded a mean of $\frac{3}{64}$, with a maximum of $\frac{1}{16}$ and a minimum of $\frac{1}{64}$ of an inch. From these and other experiments, Dr. R. concludes his results prove that, since the red blood-globules of the pig, ox, red deer, cat, horse, sheep, and goat "are all so much smaller than even the ordinary minimum size of the human red disk, as computed in my investigations, *we are now able, by the aid of high powers of the microscope*, and under favorable circumstances, to positively distinguish stains produced by human blood from those caused by the blood of any one of the animals just enumerated; and this even after the lapse of five years (at least) from the date of their primary production."

Dr. J. GIBBONS HUNT remarked that he thought these researches really contributed something towards scientific progress, and that it seemed as if the day was not far distant, if it had not already arrived, when we could actually decide, by the aid of the microscope, the important question of the true origin of a blood-stain.

Dr. JAMES TYSON observed that he had been much pleased with the paper just read, but would like to inquire whether admixture of the blood with foreign matters of various kinds, as is so apt to occur in criminal cases, would not so greatly interfere with the detection of blood-corpuscles as seriously to diminish the practical value of the process to a medical jurist. He believed that a weak solution of glycerin, on account of its slight viscosity, approached more nearly to the natural serum of the blood than did the .75 of one per cent. salt solution advised by Dr. Richardson, and, therefore, suggested a fluid composed of twenty fluidrachms of water, thirteen minims of glycerin, and one drop of carbolic acid, as a suitable menstruum for softening blood-stains.

Dr. RICHARDSON replied that the presence of other materials did indeed sometimes render the mechanical part of an examination of blood-stains more difficult

and tedious, but that when accomplished successfully the certainty of the diagnosis was in no wise impaired, since no intermingling with adventitious substances, such as hair or wool, cotton fibres, particles of carbon, or fragments of silica, would, except accidentally, alter the shape or size of the red disks. According to his experience, the most easily recognized blood-stains on clothing were those upon buttons or studs of metallic, pearl, or other hard material, and on paper collars or cuffs; next to these in facility of detection were spots upon starched muslin or linen. Stains upon unstarched linen were harder to discriminate, and the greatest amount of difficulty was met with in an attempt to diagnose stains upon dark or black woollen fabrics. In the recent murder-trial referred to in his paper, the spots were sprinkled upon the legs and feet of the prisoner's coarse cowhide boots, and, contrary to expectation, the blood-disks from these stains, five months after their production, had proved to be quite as easy to recognize and measure as those deposited upon paper collars or cuffs, and of course were very readily distinguished from the oval nucleated corpuscles of pheasant's blood, towards which the story told by the prisoner when first arrested seemed calculated to divert suspicion.

Dr. HUNT stated that Prof. Frey, in his work on the microscope, recommended a fluid called the Pacinian solution, containing a small proportion, about 4 grains to the ounce, of corrosive sublimate, for preserving blood-corpuscles, which would, no doubt, be useful in the manipulation of blood-stains. In regard to the use of high powers, his experience had been that serious loss in definition generally went hand in hand with gain in amplification, so that the more an object was magnified, the more difficult it became to measure it accurately with a micrometer.

Dr. TYSON said he quite agreed with his friend Dr. Hunt in this opinion, since his own experience with a great variety of lenses and eye-pieces to his microscopes led him to incline more and more strongly to the use of low powers.

Dr. RICHARDSON answered that so sure did he feel of being able to demonstrate the very marked difference between the corpuscles of dried clot from the various animals mentioned, under high powers, to *skilled microscopists*, that he would like Dr. Hunt and Dr. Tyson to be appointed on a committee to examine the subject with him and report at some future meeting; not that he expected to convince these gentlemen during such an investigation of his deductions from the facts observed, and especially of the correctness of his doctrine respecting the cellular structure of the red blood-corpuscles; on the contrary, he had no doubt that they would adhere for five years longer, at least, to Dr. Beale's view of the homogeneous, jelly-like nature, or to the German theory of a stroma-like sarcode and a fluid zooid constituent of the red disks; but he felt confident that he could demonstrate to their complete satisfaction that the outlines of human red corpuscles in a dried stain (whether jelly-drops, ækoid stromata, or cell-walls, it matters not to our present inquiry) are nearly twice the size of those of sheep's blood, and therefore readily to be discriminated from the latter when magnified with a power of 1800 diameters.

Dr. HUNT remarked that from the time when these corpuscles of human blood had been first seen by Leeuwenhoek, two hundred and one years ago, they have been the objects of almost constant attention from microscopists, and yet we cannot assert to-day that the structure, the size, or even the shape of the red blood-disk has been positively determined. He had himself seen these appearances in a moistened blood-clot described by the writer, under lower powers, but had placed a different construction upon them, and he was by no means prepared as yet to accept Dr. Richardson's

theory of a cell-wall. Not that he was disposed to undervalue the researches which had just been laid before the Section. On the contrary, as he had previously remarked, there was no doubt that they constituted a real advance in science. The fact that in six different cases the author of this paper had determined the kind of blood without a single error proved that his diagnoses were founded on actual and perceptible differences in the magnitudes of the dried corpuscles, as this accurate discrimination could certainly not in so many instances be the result of mere guess-work. But it should be remembered that Virchow and other earlier observers performed their investigations with inferior lenses. Had they worked with improved tools such as the $\frac{1}{2}$ th and $\frac{3}{16}$ th inch objectives used in these experiments, they would no doubt have made the same discoveries. For his own part, he would like very much to have seen some of the specimens referred to, and to have enjoyed an opportunity of verifying for himself the exact value of this high-power amplification and definition.

Dr. RICHARDSON remarked that he had more than once tried the experiment of showing objects under high powers at our semi-annual exhibitions, and he believed that he would be borne out by other members in the assertion that no one had expressed half the dissatisfaction with his efforts at demonstrating the advantages of a $\frac{1}{2}$ th-inch objective in the hall of the Academy as had his friend Dr. Hunt. He would, however, be very happy to exhibit specimens from these samples of blood-stains at his own house to any of the members present who were specially interested in the subject.

Dr. HUNT replied that the usual summer attendance upon our meetings was so small that he thought the number of members could not decently be urged as a bar to such a demonstration as he had referred to and was desirous of witnessing.

Dr. TYSON suggested that this very difficulty of showing the corpuscular forms publicly—as, for example, to jurors in a court-room—would prevent its being really and practically valuable for the diagnosis of blood-stains in medical jurisprudence.

Dr. J. H. McQUILLEN remarked that some years ago, when engaged upon an extended series of experiments to determine the action of anæsthetics upon the blood-corpuscles, he had examined with low and moderate powers of the microscope the blood of man and of a large number of animals, and also blood-stains in murder cases that had been handed to him by his friend Dr. R. J. Levis. The result of these examinations had made him hitherto very skeptical about the possibility of distinguishing the blood-corpuscles of domestic animals from those of man. He could not, however, deny the value of the experiments just described, and accepted them as conclusive evidence of the possibility of determining this important point. It would, of course, require corroborative evidence on the part of other experienced microscopists where the life of a human being was at stake, but the arguments which had been presented relative to the difficulty of making microscopical demonstrations that would be satisfactory to a jury, although plausible, were open to decided exceptions. He had no manner of doubt that expert testimony grounded on investigations carried on by the observer in the seclusion of his laboratory would be accepted by our judges as valid evidence, even if the expert could not demonstrate his experiments in a crowded court-room. Were it not so, it seemed to him that the whole system of depending upon experts was an error, for who, indeed, was an expert witness but a man who, in consequence of special study of a subject, was better qualified to form an opinion in regard to that subject than were persons ordinarily engaged in other pursuits?

In connection with this matter, he was reminded of an

error that had attracted his attention some time since, when looking over Taylor's Medical Jurisprudence, in the citation of a case in which a man who had been arrested for the murder of an old woman accounted for the blood found on his clothes by stating that he had robbed a hen-roost on the night of the murder, and wrung the heads of the chickens off. The work referred to states that "Dr. Leidy testified from a microscopic examination of the blood alleged by the accused to be chicken-blood that the assertion was false, and the blood was that of a human being."* The correct version of the testimony of Prof. Leidy was that the blood was that of a mammal, and not of a chicken, but he *did not* feel warranted in saying *it was human blood* when the life of a fellow-being was at stake.

Dr. J. G. HUNT exhibited a specimen of the common nettle-leaf (*Urtica*) in which the cystoliths were colored blue *in situ* without any dissection, whilst the remainder of the leaf was tinted violet. He remarked that this double staining of a vegetable tissue in two different colors was an example of a kind of manipulation never, he believed, before attempted or accomplished in the annals of microscopy. It seemed to him that such a capacity for absorbing different dyes indicated that the various portions of the structure were in different vital, or perhaps merely chemical, conditions at the time of their preparation.

MEDICAL SOCIETY OF THE COUNTY OF ALBANY, NEW YORK.

SEMI-MONTHLY MEETING, APRIL 22, 1874.

The PRESIDENT, DR. JOHN SWINBURNE, in the chair.

DR. WILLIAM HAILES reported the following case of *cancer of the liver*. A. B., colored, æt. 75, laborer, came under observation during the latter part of February. He had always enjoyed good health until within the last few months, and it was only within a few weeks past that he manifested much concern in reference to his condition.

He was enabled to work within a month of his death. When first examined, the following symptoms were noticed. Considerable pain was experienced in breathing, followed by a smothering sensation about the region of the heart. His abdomen protruded, and a well-defined tumor occupied a space behind the lower part of the sternum, causing a marked protrusion of the ensiform cartilage upon pressing upon it. The tumor was nodulated, and tender upon pressure, causing spasmodic respiration by embarrassing the action of the heart from pressure. The sounds of the heart were masked, and indicated effusion within the pericardial sac. There was a slight amount of anasarca.

His appetite was good, and his bowels were regular.

The treatment consisted in relieving pain by anodynes, with a nutritious diet.

The symptoms day by day became more aggravated. He died April 2.

Autopsy.—An examination of his abdominal viscera revealed an extensive cancerous disease of the liver, involving both lobes of the organ. It descended a little below the margin of the cartilages of the false ribs, but its greater encroachment was in an upward direction towards the left side, pressing upon and impeding the action of the heart and lungs.

The left lobe of the liver completely filled the hypo-

* A Manual of Medical Jurisprudence, by A. S. Taylor. Edited by Clement B. Penrose, 1866, page 249 (in Commonwealth vs. Armstrong, Philadelphia, 1869).

chondriac space. The stomach and spleen were depressed far below their accustomed space.

The cancerous growth of the liver had gone on to ulceration, and presented a raw and bleeding surface, from which had oozed a large quantity of blood, which was found either floating in clots, or mixed with the serum in the peritoneal cavity.

Section through the organ revealed numberless nodules of a yellow color projecting from the surface, and also occupying deep situations in the liver-tissue.

The liver weighed twelve and a half pounds.

A cancerous mass, about the size of a small orange, was found in the coats of the stomach on the greater curvature, an inch and a half from the pyloric orifice, and was of firm consistence. There were also numerous enlarged and indurated masses scattered over the surface of the great omentum. The mesenteric glands were also considerably involved. From the facts presented, what was the origin of the growth? Did it originate in the liver and extend from this to other organs, or did it first appear in the stomach and from this extend to the surrounding tissues?

We are told that cases of cancer of the liver are of rare occurrence, and that they are usually the sites of secondary growths; that in the majority of cases the stomach is primarily affected, and that it is very unusual for the liver to take on malignant action. Dr. Hailes concluded that the liver was invaded first, from the fact that the disease had made so little headway in the other organs. The hemorrhage seemed to be the immediate cause of death.

The doctor said that there were three ways by which malignancy may infect tissues: 1st, by direct influence upon the adjacent structures; 2d, through the medium of the lymph; 3d, through the medium of the blood. It would seem in this case that it was by the second method that these tissues became involved,—inasmuch as it was confined to so limited an area.

Both kidneys contained numerous cysts; the left having one fully as large as a turkey's egg, besides a number of smaller ones.

Dr. WILLIAM H. BAILEY made the following report of a case of *cancer of the stomach and liver, with peritonitis*. William N. L.; æt. 49; occupation, night-watchman. Early in January, three months ago, he began to notice that he was losing strength. At the same time, pallor of the face appeared, and he had some pain in the stomach, but not so severe as to render it a prominent symptom. He vomited his food occasionally.

The asthenia was most marked. These symptoms came on gradually, increasing until his coming under treatment, March 16.

Further questioning elicited the fact that he had had pain in the epigastrium, with occasional vomiting, for a year back.

He has travelled extensively in all climes, and was in the Army of the Potomac during the war. He had contracted no disease, only receiving an injury in his left eye in the army from a limb of a tree, which destroyed the organ. He has always been a strong, healthy man, excepting that several years ago he contracted intermittent fever, while living adjacent to the city, but recovered on changing his location. His family history was not obtained. Condition when he came to the office for treatment, March 16: His pallor is very marked, there being a yellow tinge. He says he is very weak, and can hardly keep about, being compelled to sit frequently. There is some pain in the stomach, but the symptoms of disease of this organ are none other than might be referred to a moderately severe case of dyspepsia. Examination about the epigastrium reveals nothing. The liver is of normal size. A constant systolic murmur is heard over the heart, plainest at the base,—a roughened, blow-

ing sound. The action of the heart is regular. There is no enlargement of the spleen or of the lymphatic glands, these being examined with a view to the possibility of the case being one of leucocythæmia. With the same idea, the blood was examined microscopically, but no increase of white blood-cells was detected, though the examination was not altogether satisfactory. On the 21st of March he sent word that he was unable to visit the office. The night previous, he vomited freely a brown, coffee-colored fluid, which was noticed as being much more abundant than the ingesta. There was no much pain, and when visited in the morning he was seemingly quite comfortable. For four days he improved, having little pain, though vomiting frequently, and, although weak, was able to walk a few blocks. His vomiting was relieved by a mixture of sweet spirit of nitre, paregoric, and soda, and small quantities of fluid food were retained.

His countenance was always cheerful. On the morning of March 25 he felt better than any time since the 21st. His chief complaint being debility at this time, his blood was examined microscopically; the least attempt to take food provoked an attack of vomiting; his cough then set in and continued all night, in spite of remedies, leaving him prostrated in the morning. He craved cold drinks constantly, which aggravated the vomiting.

Dr. Swinburne was now called in consultation. He was inclined to believe a little thickening could be detected at the epigastrium.

The symptoms, however, left no doubt in the minds of the physicians who saw him that the malady was cancer of the stomach. After the 25th, the pain was much more marked and constant, with more tenderness on pressure. He retained his cheerfulness throughout.

There was no febrile action, prostration and pain expressing all his symptoms for the next three days, at the end of which he died.

Autopsy, twenty-four hours after death.—There was pallor of the whole body, no waxy or dusky tinge being observable. Emaciation was marked, and the muscles were very flabby. But little rigor mortis.

On opening the abdominal walls there was found over the stomach a quantity of thick, yellow pus, and there was evidence of peritonitis affecting the gastric and diaphragmatic peritoneum. A cancerous mass surrounded the pyloric end of the stomach, extending along the lesser curvature for one-third of its length: this appeared broken down on the external surface, a spot of the size of a silver quarter having the look of an ulcer. This was probably the cause of the peritonitis. On the inner surface of the stomach there was still more breaking down of the cancer-tissue. The pyloric orifice was open, admitting the passage of the little finger.

The stomach was greatly distended, and contained two quarts of coffee-colored fluid. This mass of diseased tissue was about the size of the first, and was completely covered in front by the left lobe of the liver. The whole mass was very firm. Part of the pancreas was adherent and included in it. There were also deposits of cancer-matter, of the size of a walnut and less, throughout the liver. These seemed comparatively recent, and none of them protruded above the surface of the organ. The liver was not enlarged; weighed three and a half pounds. One mesenteric gland was enlarged and very hard; calcareous.

Other abdominal organs were entirely healthy; the spleen quite normal in size and structure.

The heart was somewhat enlarged, and there was a patch of atheromatous deposit on its surface. The coronary artery was entirely calcified. The aortic valves were not competent, and were thickened. A fibrinous clot, sixteen inches long, extended up the aorta.

The lungs were healthy. The brain was also found healthy.

The deposits in the liver and stomach were examined by Drs. Vanderveer and Balch, and found to be true cancer.

In this case the diagnosis, though quite certain towards the last, and placed beyond a doubt by the autopsy, was somewhat marred by the absence of one or two almost constant symptoms of the disease.

There was no tumor of the epigastrium. This is said by Da Costa to be the only symptom at all distinctive of cancer of the stomach. The case is very instructive, not only in the absence of this symptom, but in the cause for its absence being found. The thin left lobe of the liver covered the cancer completely, preventing all possibility of any evidence of the tumor, which really existed, being obtained by palpation.

Pain is usually another symptom, and perhaps as constant as any other next to tumor.

This peculiar pain of cancer,—lancinating, piercing, sharp,—which we feel ought to be experienced in all cases of cancer-growth, is not always present when the deposit is in the stomach-walls. In fact, I believe the general verdict is that there is nothing distinctive about it here. It was not augmented by food, I believe: so far as the stomach-symptoms went there was little to indicate the existence of anything more than chronic indigestion or subacute gastritis, the latter being rendered more probable by the fact of his having been a rather intemperate man. As concerns this symptom of pain, it was not made prominent at all by the patient in giving his history. Vomiting was a symptom from the first. This was more characteristic of the disease than either of the others mentioned, especially considering the nature of the matter ejected. Persistent vomiting is suggestive of cancer, but not diagnostic. Cases are mentioned of thickening about the pyloric orifice causing it, and so also do *sarcina ventriculi*, pregnancy, sometimes ulcers, etc. But I suppose that, in cases of irregular vomiting lasting several months, cancer should be first thought of. The coffee-ground matter, too, is, if thrown off for a long time, characteristic. In gastric ulcer, blood is vomited in abundance if at all, and not in this particular form. The pallor exhibited in this case is indicative of the cancerous cachexia; so, too, it is of anæmia. There was nothing peculiar about it; nothing of the yellowish tinge spoken of as that of this cachexia.

The marked weakness, which was one of the three prominent symptoms from the first, had nothing in it peculiar to cancer. It was this weakness, with the pallor and the heart-murmur, which was at first thought to be anæmic, which led to the thought of leucocythæmia. But examination detected no enlargement of the spleen or liver, or of the lymphatic glands, and no increase in the number of the white blood-cells was found by the microscope.

Taken together, the pallor, the continued vomiting of coffee-colored fluid, and the tired feeling or weakness, may be looked on as sufficient upon which to base a diagnosis of cancer of the stomach, even in the absence of any marked pain or of the tumor in the epigastrium usually spoken of as the most constant symptoms of cancer of the stomach.

Dr. JAMES S. BAILEY gave the following report of a case of cancer of the *pancreas, liver, mesentery, and uterus*. C. B., German, æt. 36, mother of five children, the youngest 3 years old. She menstruated at the age of 14, and was always regular and enjoyed good health until November last, when she visited the cemetery while her catamenia were upon her. She sat on a cold, damp stone, and walked through the wet grass; she contracted a cold, and her menses ceased. She was seized with pain in the back and abdomen, which

resembled labor-pains. She still menstruated regularly until in February, when it ceased. Since that time she suffered more pain, particularly after eating.

The abdominal recti muscles were separated from over-distention, and two ridges were seen longitudinally over the region of the ovaries. She rapidly emaciated, and experienced a throbbing sensation in the left inguinal region, as if an abscess was forming. She complained of great weight on standing. Simpson's sound, being introduced, revealed the length of uterus to be two inches. Its mouth was flabby and open; and on the anterior and posterior portions were plainly felt tumors of some size.

There had been a tendency to constipation; there was also a smarting, burning sensation in the region of the womb.

My first visit was made June, 1873, several other physicians having attended her previously. She died in July.

Autopsy, twenty-four hours after death.

Body much emaciated. Rigor mortis marked. Skin had a general cachectic appearance. The right lung was bound down with numerous adhesions to the costal pleura, and the cavity on this side contained eight ounces of serous effusion. Left lung normal. Pericardial sac contained a small amount of serum. Stomach healthy.

On the outer border at the bifurcation of the trachea there was a deposit of carcinomatous matter, which on pressure exuded a blackish-looking fluid. The pancreas was imbedded in a homogeneous mass, having the appearance of malignancy. The mass was hard and indurated. There was also a constricted mass in almost the whole of the mesentery; in such small portions of the mesentery where a like condition was not evident, the glands were enlarged and softened. The colon and meso-colon contained upon the anterior coats a similar mass. The walls of the ascending colon were considerably thickened, and deposits of the same character were found in them constricting the intestinal canal.

The liver was small and pale, with normal capsule. In the upper part of the right great lobe there was a circumscribed portion, about one and a half inches in diameter, of a like character with that found in the mesentery and intestine. The kidneys were small and flabby, otherwise normal.

The peritoneal cavity contained about a pailful of a greenish-looking fluid.

Upon the anterior and posterior aspects of the uterus was found a mass of like character to that found in other parts of the body. The recto-vaginal tract was filled with the same mass, being felt through the rectal walls as a hard indurated tumor. The same condition was found behind the peritoneal layer of Douglas's cul-de-sac.

The left ovary was normal; the right ovary hard and indurated, and about two inches in diameter. On its upper and outer sac it contained a small cyst, the walls of which were easily ruptured.

Bladder empty.

Microscopical examination.—Several specimens were examined from different organs. Large giant-cells were found, and the diseased condition is evidently of a carcinomatous nature.

Dr. ALBERT VANDERVEER reported the following interesting cases of *cancer*, and exhibited the pathological specimens.

Case I.—*Cancer of the Stomach*.—M. C., married, æt. 71, temperate habits for the last twenty years, had had occasional sharp pains in the region of the stomach, and at times would vomit food. Yet he considered that he was in good health, and was enabled to attend to his business,—that of a carpenter.

I saw him first January 10, 1874. He has been in decided ill health for the past year, failing in flesh and strength, suffering severe pains in the stomach, and most of the time vomiting his food. For the past month his stomach has not retained anything, and only during that time has he been confined strictly to his house. He appears very much emaciated, and extremely pale and cachectic.

In the epigastric region I can define a hard tumor the size of a goose-egg, painful to the touch, producing when handled a sensation of extreme weakness and a desire to vomit.

Some œdema of the feet. Lungs and other organs appear healthy. Urine examined: specific gravity 1020, acid; no albumen, and a fair quantity passed in twenty-four hours. Ordered small doses of morphine, to be administered with a bitter tonic, also subnit. bis. and pepsin.

The latter acted well, but he could not bear the tonic and anodyne. There was no improvement in his case, —none was expected. Death occurred on January 19, 1874.

Autopsy, twenty-four hours after death. Rigor mortis marked. Decided emaciation; no general anasarca; slight swelling of the feet. Lungs and heart in a healthy condition. Very light pleuritic adhesions, and slight atheromatous change in inner coat of large arteries.

The coats of the stomach, from the cardiac to the pyloric opening, were thickened in some places as much as two inches; the deposit scirrhus in character. The cavity of the stomach was almost completely obliterated, and yet the passage through its orifice continued open.

It could not hold more than an ounce of fluid. In some places the mass had softened, and presented points of ulceration. The great omentum was filled with hardened masses, from the size of a pin's head to that of a cherry. Spleen normal; capsule shrunken; adhered decidedly to great end of stomach. Pancreas not diseased. Liver normal. Kidneys normal. Intestinal canal from pyloric orifice to anus in a healthy condition. Slight effusion of serum in peritoneal cavity. Scrotum on examination presents double hydrocele, and on a more careful examination each testicle is the seat of a cancerous deposit; the one on the right quite large. Head not examined.

Case II.—Cancer of the Stomach.—L., married, æt. 62, good habits, always in excellent health excepting one severe attack of cystitis ten years ago, but after six months' illness made a good recovery. Came to the office December, 1872, presenting a decided case of jaundice, for which he desired treatment. Gave him alteratives alternately with tonics until January 12, 1873, without any improvement in his case. Constant failing in strength and flesh, with little vomiting. Has continued to work until the present time.

Decided to stop work, remain home, and seek other medical advice. A careful examination revealed decided tenderness over the liver, but did not detect any tumor in the epigastric region.

April 21, 1873, again solicited to see the patient with his attending physician; in the interval he has consulted many doctors, but his disease has been gradual and certain in its advance. Is a mere skeleton in appearance, and very weak; presents the same deep jaundiced condition as when last seen. It is difficult to define the borders of the liver; a hardened mass is felt over the region of the stomach. Of late he has vomited everything. Urine on examination is found loaded with bile, and is scanty in quantity. Died April 25, 1873, from inanition.

Autopsy, eighteen hours after death. Muscles rigid,

—what little is left of them. Encephalon not examined. Organs of the thorax healthy.

The pyloric end and about one-third of the stomach were found to be the place of deposit of a cancerous mass as large as a good-sized orange, flattened. The pyloric orifice of the stomach was closed from the inflammation and ulceration present. The cancerous mass also enclosed a portion of the pancreas, all the vessels going to and from the liver, and a portion of the duodenum. The liver was about half its natural size, and filled with nodules of cancerous growth. The gall-bladder was shrunken, containing about one drachm of bile. Spleen very small, but healthy. Omentum studded with hardened masses of various sizes. Kidneys healthy; no traces of inflammation about the bladder. Testicles not examined.

Case III.—Cancer of the Testicle.—W., æt. 65, suffered for the past fifteen years from hydrocele on the left side of scrotum. Has been tapped many times. During the past year the testicle has become quite hard, much enlarged, and pains him constantly. His general condition has been good, but now, from want of sleep and the intense pain he suffers, he is failing in strength. Is willing to undergo any operation that will promise relief. Has a large scrotal hernia on the same side. In consultation with his attending physician, Dr. Newcomb, October 12, 1873, we decided to remove the testicle, which was done. The rupture gave us some trouble, but, notwithstanding, the patient made a good recovery in three weeks.

The testicle is as large as a goose-egg. The tunica vaginalis is very much thickened, but the inner part of the mass is found on microscopic examination to be encephaloid in character. The structure is so changed that it is impossible to define any portion of the testicle proper. The patient at the present time remains in good health, with no symptoms of the disease returning.

Case IV.—Cancer of the Liver and other Organs.—M. A., æt. 44, married, mother of four children, usually in good health. Lost the left eye from disease two years ago. Family history good. Not well nourished; is over-anxious to provide a home for herself and family, and denies herself much in food. Is somewhat jaundiced; bowels constipated, with failing strength, yet does her own house-work; menstruates regularly; is troubled much with nausea; is growing thin in flesh, and does not sleep well, and complains of much pain in the right side.

On examination, a distinct enlargement of the right lobe of the liver can be felt, extending downward and inward towards the umbilicus. Is very hard to the touch, and percussion gives acute sickening pain. No disease of any other organ can be detected. Ordered tonics, nourishment, rest, and anodynes sufficient to relieve pain. Was called to attend the patient August 17, 1873. At November 1, the patient had continued in about the same condition, but occasionally vomited her food. The enlargement had extended down towards the inguinal region, and on a level with the navel.

February 1. Has just passed a menstrual period, but is now not able to leave her bed; is much emaciated; skin darkly jaundiced; can retain but little food in her stomach; suffers greatly from pain. Enlargement is much increased, and of a stony hardness.

Bowels move once in four days; fæces of a light clay color. Urine is passed quite freely, and is high-colored. A tumor about the size of a butternut can be felt in the left breast, also one much larger surrounding the sternal end of the left clavicle. These tumors feel very hard, and give her much suffering. Death occurred March 16, 1874. She did not menstruate after February 1. Is a mere skeleton; all of the soft tissues

are apparently absorbed. Has been able to retain but little of anything in her stomach for the past three weeks; bowels not moved during that time.

The enlargement of the liver fills almost the entire abdominal cavity. The tumor in the left breast has increased in size, while the breast itself seems entirely absorbed: in fact, the tumor and nipple are all that can be defined. The tumor of the clavicle has included the greater portion of the bone. Another tumor, of the same stony hardness, has developed in the right breast. The jaundiced condition of skin has increased. She appears much like one suffering from an attack of Addison's disease. The flow of urine has been very scant of late. Mind was clear until death.

Though every inducement is offered, and every argument advanced, yet the consent of her family to hold a post-mortem cannot be obtained. Case believed to be one of cancer of the liver and other organs.

Case V.—Cancer of Duodenum and Pancreas.—Mrs. C., æt. 49, had enjoyed good health up to two years ago last May; Dr. Vanderveer saw her for the first time, July 29, 1873. Her menstrual periods then ceased, and she noticed soon after that her food, after eating, gave her some distress. She was married, and was the mother of two children, both living. An aunt died of some cancerous affection; her family history is otherwise good. She appears pale, and has an anxious expression.

Ten months ago she began to vomit food, with also a black, coffee-colored fluid in large amounts; and for the last two months this has been a very troublesome symptom. The bowels are constipated; there is considerable pain in the epigastrium and the right hypochondriac region. A distinct tumor can be felt at the lower end of the pyloric orifice of the stomach. The urine is normal. Ordered subnitrate of bismuth, and enemata to empty the bowels twice each week, with anodynes to relieve pain.

December 1, 1873. Mrs. C. has been more comfortable, does not vomit so much, and gets more rest, but is failing in strength and flesh. There is a decided cachexia present; a marked yellowness also of the skin, more prominent at times. Takes very little food. From this time until death, she was kept quiet by morphine.

There was no more vomiting, although she ate freely. *Post-mortem* held January 30, 1874.

Rigidity well marked; body extremely emaciated; mesentery attached to abdominal walls; stomach partially filled with liquids, apparently healthy throughout its whole extent. There is a hard mass, the size of a turkey's egg, about three inches below the pyloric orifice of the stomach in the duodenum, including its walls; also a portion of the pancreas. Left lung adherent; cicatrix in the apex of left lung. Cicatrix in upper part of right lung. Edges of liver rounded; parenchyma normal. Small amount of effusion in pericardium. Heart normal. Kidneys normal. Encephalon not examined.

Microscopical examination of diseased portions shows an abundance of giant-cells with nidus and well-marked stroma.

Case VI.—Cancer of the Stomach.—Mrs. V.; æt. 66; widow. While attending another member of the family, my attention was called to her condition, September, 1872. Has been confined to the bed for the past two years, and for the three years previous had been troubled with dyspepsia, as she had been told. Accounts of family history not clear, nor of the time of her change of life. Is now too feeble to give her history. Is merely skin and bone. For the past two years has vomited much dark-looking fluid and the most of her food. Her daughter states that for the past two months she has absolutely refused to take anything into her

stomach, dreading the vomiting and distress that followed. Is sure that she has not taken an ounce, all told, in that time. A hardened mass can be felt at the pyloric end of the stomach. Bowels not moved in two months. Died November 1, 1872.

Post-mortem, twenty-four hours after death. All of the organs in the body were in a healthy condition, except the pyloric orifice of the stomach, and this was closed and surrounded by a hard scirrhus growth, not larger than a butternut, and not yet in a state of ulceration, but completely closing the stomach.

Case VII.—Cancer of Œsophagus.—W. M., æt. 62, April, 1873, came for treatment for inability to swallow. On examination with œsophageal tube, could detect a decided stricture about four inches down, through which only the smallest-sized bougie will pass. Looks pale; has lost in flesh, and is weak. Œsophageal bougies of various sizes were passed twice a week, until the largest could be passed. The relief was marked up to June 10, 1873, when, in withdrawing the largest one, he complained of some pain and raised a trifle of blood, while in the shoulder of the instrument could be seen several pieces of a fleshy-looking substance, which was examined under a microscope, and exhibited small cells and spindle-shaped cells, with nuclei, after which the use of bougies was discontinued. When informed that his case was believed to be one of cancer, he became disheartened, and begged to have the instrument passed for temporary relief. Was confined to his house two months previous to his death, not able to swallow much of anything. Suffered some pain, though it was not acute. No family history obtained.

His habits had been bad for the greater part of his life, and for the last ten years he had been a steady drinker.

Autopsy.—Cachectic appearance; body emaciated; abdomen collapsed; rigidity marked. The right elbow-joint much enlarged. Several of the costal cartilages are ossified.

Thorax.—There are adhesions of the upper and posterior portions of right lung to the pleura costalis. Two ounces of effusion in right pleural cavity. Right lung crepitant and healthy throughout its whole extent. Four ounces of effusion in left pleural cavity. Left lung not adherent at any point; parenchyma healthy throughout the whole extent. Some hypostatic congestion.

In about the middle of the œsophagus the walls anteriorly and laterally are ulcerated through, excepting a small band of tissue which divides the two. The pyloric and cardiac orifices of stomach healthy. Stomach contains about 3ii of a dark, grumous-looking fluid. Coats normal. Pericardial sac contains about an ounce of serum. Heart normal in size. Parenchyma firm; semilunar valves normal; mitral valves healthy; considerable atheromatous change in the descending aorta. Large fibrinous clots extending from the right aorta into the right ventricle and into the arteries. Tricuspid valves healthy.

Abdomen.—Liver nine inches long, seven and a half inches broad, three and a half inches thick. Hepatic tissue atrophied and yellow in appearance; appears shrunken and hob-nailed; edges rounded and shrunken. Gall-bladder full; spleen much enlarged, seven inches long, four and a half inches wide, two inches thick. Its surface is studded with small prominences. Some of the mesenteric glands are somewhat enlarged and of a dark, congested appearance. Left suprarenal capsule healthy. Left kidney normal in size. Cortical portion appears granular and roughened. Capsule thickened and adherent at points. Right suprarenal capsule is abnormal, and contains numerous deposits. Right kidney of the same general character as the left one. Bladder contracted.

Microscopical examination of diseased portion of oesophagus reveals it to be encephaloid in character.

Case VIII.—Peritonitis from Ruptured Ovarian Cyst.—Dr. John M. Bigelow was called, March 6, to see Mrs. W., æt. 58. She had been complaining of great pain in the right iliac region for seven or eight days previously. Her symptoms pointed to peritoneal inflammation, as indicated by tympanitis and pain and tenderness on pressure, with the symptoms usually found in diffusive peritoneal inflammation.

From the time the first symptoms were manifested until death took place, was twelve days.

Post-mortem made by Dr. A. Vanderveer. Head and organs of the thorax not examined. There was an immense deposit of fat in the abdominal walls. A crucial incision was made, and on turning back the flaps the intestines were observed to be greatly distended with gas. The great omentum extended down, and was adherent, by recent bands of false membrane, to the upper surface of what we first supposed to be a distended bladder. The lower portion of the omentum was very much discolored with recent infiltration of blood. The folds of the small intestines in the right inguinal region were adhering together by lymph, the result of recent inflammation. No deposit of pus found elsewhere, nor any other distinct signs of peritonitis.

On separating the lower part of the omentum from the supposed distended bladder, the latter was found to be an ovarian cyst from the left broad ligament. The pedicle was about three inches in length, and twisted upon itself; in the act of twisting, a blood-vessel had been ruptured, and the blood had infiltrated the walls of the cyst and the lower part of the omentum.

On opening the cyst, it was found to contain a quart of bloody-looking fluid, which does not coagulate on standing. Other organs of the abdomen healthy. The peritonitis undoubtedly resulted from the twisting of the pedicle of the tumor and effusion of blood from the ruptured blood-vessel.

REVIEWS AND BOOK NOTICES.

A TREATISE ON FOOD AND DIETETICS. By F. W. PAVY.

This volume of nearly six hundred pages certainly affords sufficient space to say all that is at present worth saying in regard to the medical aspects of the food-question. The literary work is well done; the style, though not strikingly terse, is free from verbosity, and there are many parts which are worthy of high commendation from a scientific stand-point,—notably the general discussion on the rôle played in the economy by the nitrogenous alimentary principles and by the carbohydrates. We must, however, state our conviction that the book does not fill the want that exists for a complete, thoroughly scientific, and practical work upon the subject. It contains an enormous amount of very curious but utterly useless facts, and omits very many things that are of the utmost importance. The long chapter, for example, upon "Animal food sometimes but not ordinarily eaten," shows a very wide range of reading in its author, but seems to us of no practical value. What use is it at the bedside to know that a black man tastes more salt than does a white man, and is therefore better eating, or that monkeys are eaten by the Chinese, the natives of Ceylon, the Indians, and so on through a long list of tropical savages, white and black and copper-colored? In the same way the chapter upon "Fruits" is largely wasted space. We

do not want to be misunderstood: if a scientific author chooses to put such material in his book, we do not complain; it has a curious interest, if not a practical value. What we object to is the omission of matters of vital importance, and the stuffing of space, which their discussion ought to occupy, with the merest padding for an idle moment. In the work before us some of the most vital subjects of the hour are avoided, and their place filled up with these jottings of desultory reading. Practically nothing is said in regard to the value of want of value of beef-tea, or the physiological action of tea and coffee, and the discussion on alcohol is almost childish in its feebleness.

We do not want to be too severe upon the work of Dr. Pavy, or in any way to express an unfair judgment, but we think those of our readers who are acquainted with Dr. Letheby's little volume upon the same subject will agree in believing that it contains at least as much of value as its very much larger and more pretentious rival. In conclusion, we may express the hope that when the present work reaches its second edition the author may well use the great room there is for improvement, and bring the whole volume to the level of the parts first mentioned in this notice; and when this is done, the emendated book shall have our highest praise.

THE PRIZE ESSAYS OF THE BOYLSTON MEDICAL SOCIETY FOR 1874. I. Experiments on the Action of Bile in Promoting the Absorption of Fats. By CHARLES H. WILLIAMS, A.B., of Boston. II. On Intestinal Digestion. By G. M. GARLAND, A.B., of Lawrence. Pamphlet, 8vo, pp. 26, with Two Plates. Reported from the *Boston Medical and Surgical Journal*.

In these essays we have some of the first-fruits of the new method inaugurated scarcely three years ago at the Harvard Medical School. They emanate more directly from the Physiological Laboratory of the school, under the direction of Dr. H. P. Bowditch, Asst. Prof. of Physiology. They are creditable alike to the school, Dr. Bowditch, and their authors.

We have not space to describe the process or apparatus used, though in the case of the first subject both are somewhat different from those employed by previous experimenters, but append the conclusions. Those of Mr. Williams are as follows:

1. That the passage of neutral fats through capillary canals or pores is favored by the presence of bile in these pores.
2. That this action is increased when the bile is rendered alkaline, and diminished when it is acid.
3. That the action cannot be due to the bile changing the form of the pores.
4. That after passing through membranes moistened with bile, the fats appear more finely divided than with membrane wet with other substances, apparently showing that the drop-tension or cohesion of the fat has been affected.

II. Mr. Garland followed Thiry's method of isolating a portion of intestine by excision and leaving its attachment to the mesentery intact.

Like Thiry, he found the quantity of intestinal juice secreted by the isolated loop exceedingly small,—from five to fifteen drops in an hour.

From experiments with the juice he concluded—1, that intestinal juice converts starch into sugar; 2, its action upon boiled white of egg is doubtful; 3, whether alkaline or acidified, it exerts a solvent influence on fibrin; 4, its action was increased by combining it with a 0.2 per cent. solution of hydrochloric acid, while Thiry declared that intestinal juice when acidified ceases to act upon fibrin; finally, he observed that fibrin was converted into peptones by the action of hydrochloric acid alone.

ANATOMY OF THE INVERTEBRATA. By C. TH. V. SIEBOLD. Translated from the German, with Additions and Notes, by WALDO I. BURNETT, M.D. James Campbell, Boston, 1874.

This book appears to be a reprint from stereotype plates of the well-known translation of Von Siebold which appeared in 1853; the original German edition having been published in 1848 or 1849. The book is too well known to need comment from us, but we can commend it to every one who is desirous of posting himself upon the subject treated of as known a quarter of a century ago.

PAPERS CHIEFLY ANATOMICAL. By BURT G. WILDER, M.D., Prof. of Comp. Anat. and Zoölogy, Cornell University, New York. Salem, Mass., 1874.

These memoirs are of the purest science, and therefore, although most creditable, and a just source of pride to every American, have but little interest to the "busy practitioner." The only one directly connected with medicine is upon a double human monster, with a very interesting note and figure of a dicephalous Peruvian mummy.

GLEANINGS FROM OUR EXCHANGES.

THE PREVENTION OF HYDROPHOBIA.—*The Lancet*, in its issue of May 23, editorially discusses the question of the best means for securing the public safety during the season when rabies is prevalent among dogs and other animals. The discouragement of the breeding of useless dogs, by a rigid system of licensing and the compulsory use of numbered collars, would do much towards diminishing the number of accidents. It has been proposed to render dogs harmless by cutting off and filing down their canines and incisors. Experiments have shown that when rabid dogs, whose teeth had been filed down, were allowed to attack healthy animals, no communication of the disease occurred, and the author of the system (M. Bourrell) claims that its general adoption would extirpate hydrophobia, by rendering its transmission impossible. The use of the muzzle should be vigorously enforced, but it should be of such a description as to admit of free respiration and the exposure of the tongue to the air.

The most effective preventive measures are perhaps those which could be easily applied by owners of dogs if a reasonable watchfulness were exercised and the animal were placed under restraint on the first appearance of premonitory symptoms.

For days before a dog becomes savagely rabid he manifests certain peculiarities of demeanor, hiding in obscure corners, swallowing indigestible substances, sometimes gazing intently as though watching the movement of some object on the ground, now and then snapping at anything which is presented to him, and altogether behaving with an eccentricity which attracts notice, although it is seldom referred to its cause. After a time the dog is missed suddenly, and never seen again. The owner deplores the loss, and never suspects that the creature, in obedience to a resistless impulse, has rushed away on its mad career, and, if it has escaped the sticks and stones of the excited populace, has at length crawled into some dark place and died. It is not much to ask of owners of dogs that, in the interests of the community, they should remember the possibility, to say the least, of these animals becoming the subjects of a terrible malady, which, being communicated to man, is certain to result in death in the most hideous form: a lifelong regret will not compensate for a calamity which watchfulness might have prevented.

ANTIDOTE OF RABIES (*The Lancet*, June 6, 1874).—Dr. Jitzki communicated, in January, 1874, to the Imperial Society of Wilna (Russia), a fact of some interest. A very savage dog was in the habit of killing vipers (*Coluber berus*), and his mouth and neck were covered with wounds inflicted by the vipers. This animal was bitten by a mad dog which had already bitten several horned cattle and a dog; these all perished in a rabid state. The owner of the first-mentioned dog, not wishing to destroy him, determined, however, to watch him, and made up his mind to kill the poor animal at the first symptom of rabies. Nothing, however, happened, and the dog remained quite well.

This case struck Dr. Jitzki, especially as he learned that a woman of the same locality had been bitten by a viper and some time afterwards by a mad dog without suffering from hydrophobia. He was thus led to suspect that there is antagonism between the virus of hydrophobia and the virus of vipers. If this were true, young dogs might be inoculated with the latter virus, and thus be made insusceptible to hydrophobia.

FORK-SWALLOWERS.—"L'homme à la fourchette est le héros du jour." This seems the opinion of the French press, and the case itself is of interest and has given the excuse for the recital of numerous similar cases. He is a lad of 18, a shop-boy, who had been fascinated by the tricks of a juggler who swallowed swords, knives, and forks. The last trick he had imitated a dozen of times, when one day the fork slipped from between his teeth and could not be got hold of. A doctor caught its end with a pair of dressing-forceps, but the attempt at removal gave the patient so much pain that he had to let go: the fork slipped into the stomach, and the pain was at once relieved. M. Labbé, under whose care the patient is, has proved the presence of the fork in the stomach, by an examination by a special sound under the influence of chloroform. The sound has a sounding-board apparatus attached to it. No attempt at interference has as yet been made.

M. Baillarger has reported a case in the *Union Médicale* of a lunatic who swallowed a fork, and lived six years with it in his stomach. He had walked with a peculiar stooping gait, and tried to avoid sudden shocks. It was found at the autopsy, with the points at the cardiac end of the stomach.

M. Loscoles de Lozère tells M. Labbé of the case of a lady, who, in 1824, swallowed a fork, which was well borne for six months. It then began to cause pain and swelling in the stomach, and eventually was cut out by M. Quairoche with perfect success.

M. Le Tellier reported, in the *Revue de Thérapeutique* in 1853, the case of a suicidal female, who, after various unsuccessful attempts, managed to swallow a fork. It gave no trouble for four years, when intense pain and abscesses in the thigh heralded its appearance after a long journey from the stomach. The greater part of it was removed from the trochanteric region, but the patient died exhausted.

Dr. Charpy, of Lyons, saw the following. A female lunatic, æt. 56, swallowed a fork, told of it, was not believed, till after some days a tumor was felt in the right iliac fossa, which increased in size, became red, with adherent skin, eventually bursting and giving issue to a large fork twenty days after it was swallowed; for fifty-five days air and débris of food came through the wound, which eventually healed up.

M. Dureau has written to the *Gazette Médicale* an interesting and elaborate note of remarkable substances found in the stomach. From this we extract the following bearing on the fork question. Mr. Lund's case of recovery after passing a dessert-knife from an abscess close to the umbilicus is an allied case. Dr. Chemin's case, reported by Velpeau to the Academy

of Sciences in 1849, was that of a man who, trying to force down a veal-bone which had stuck in his throat, swallowed the fork by accident. It remained fifteen days in the stomach, four months in the pyloric end, three months in the small intestine, and eventually was passed by stool, much diminished in size. The patient recovered.

M. Foville records at great length, in the *Gazette Hebdomadaire* (No. 18, 1874), two rather curious cases in which one maniac swallowed *seriatim* the whole of a set of dominoes with which two old gentlemen had been playing, while they were taking a short walk in the garden, and passed them all again by stool; while another, in a state of religious fervor, swallowed his beads, to which a cross was attached, and passed it also entire without injury.—*Edinburgh Medical Journal*.

THE DANGER OF MIXING CHROMIC ACID WITH GLYCERIN.—In preparing mixtures of this kind, which have been so highly recommended for diseases of the mouth and throat, care should be taken not to add these reagents together too quickly, for it is said that the fluid may take fire and explode. There is no danger if the glycerin be added drop by drop, for then a little warmth only will be generated.—*Il Raccogl. Med. Memorabilien*, 2, 1874.

MISCELLANY.

A LATE agent on the San Carlos reservation relates the following: "The Indian Department are in the habit of issuing on certain days rations for each man, woman, and child; and on one of these occasions a crowd was assembled around the agency awaiting their turn, when a little commotion was noticed among the squaws, one of whom was seen to lie down on some hay on the ground, while others gathered around, the cause of which was explained in a few minutes by the screams of an infant. In less than half an hour the mother claimed a ration for the little stranger."

Such is woman in her *wild* though *natural* condition. A bad community for a doctor, you will doubtless say.—*B. G. McPhail, M.D.*, in *The Clinic*.

DEATH OF AN INFANT FROM THE APPLICATION OF AN ACETATE OF LEAD LOTION TO THE NIPPLES.—M. Bouchat mentions the case of a lady who, having used a lotion called *Eau de Madame Delacour*, a favorite quack remedy in Paris for sore nipples, omitted to wash it off before putting the child to her breast. The child was shortly after seized with violent colic, and died in a few days with all the usual symptoms of lead-poisoning.—*Gazette des Hôpitaux*.—*Boston Med. and Surg. Journal*.

SPONGY iron is produced by calcining powdered iron ore with charcoal. Such iron forms a most excellent filter, more powerful, it is said, than even animal charcoal. It is said that even sewage-water filtered through a layer of this substance is completely purified, and will remain sweet for almost an indefinite time.—*The College Courant*.

DR. LEVIS having resigned his connection with the clinic upon diseases of the eye at the Jefferson Medical College, Dr. William Thomson is now sole lecturer upon the subject at the institution named.

ACCORDING to one of our exchanges, if a horse be rubbed with a mixture of fifteen drachms of assafœtida in one tumbler of vinegar and two of water, the flies will not annoy him. The same object, it is stated, can be obtained more cheaply by anointing the animal with a small quantity of the oil of laurel.

NOTES AND QUERIES.

DEATH OF DR. JAMES McNAUGHTON.

Dr. James McNaughton died in Paris, June 19, from heart-disease. He had gone abroad, accompanied by his wife and two daughters, to visit the home of his boyhood in Scotland. Six years ago his fiftieth anniversary in the practice of medicine was celebrated in the Albany County Medical Society. He had lectured in medical colleges for more than half a century. At the time of his death he was President of the Albany Medical College, and Professor of the Theory and Practice of Medicine. He was the oldest teacher in medicine living.

He was born on the Grampian Hills, in Perthshire, Scotland, in 1796, and at the time of his death was seventy-eight years of age. Prepared for college at Kenmore, Dr. McNaughton was admitted to the University of Edinburgh in 1812, and graduated in the medical department in 1816. He then accepted a position as surgeon on an emigrant-ship to America, and while the ship was waiting he visited some relatives in Albany, who persuaded him to resign his position and locate in the practice of medicine in that city. He determined to do so, and soon took a prominent position in the profession. Three years later he was appointed a lecturer on anatomy at the College of Physicians and Surgeons at Fairfield. The next year he was appointed to the Chair of Anatomy and Physiology, and continued to lecture for nineteen years on these subjects. In 1840 he was made Professor of the Theory and Practice of Medicine in the Albany Medical College, a position he filled with great credit until his death.

He had completed his fifty-third course of lectures, and during this time had not missed a dozen lectures.

Dr. McNaughton was known as a contributor to the various medical journals. He was a tall, hale-looking man, with courteous and genial manners. Prof. Christison, of the University of Edinburgh, is believed to be the next oldest living lecturer: he began in 1838.

A special meeting of the Medical Society of the County of Albany was held in the council-chamber, City Hall, July 2, 1874, to take suitable action in reference to his death. The attendance was very large, and, in the absence of President Swinburne, Dr. Thomas Hun was called to the chair.

Eulogies upon the deceased were pronounced by several members, and the following resolutions adopted:

"*Resolved*, That this Society has lost not only the eldest, but also one of its most respected and valuable members. We deplore his loss, and we sincerely mingle our sorrows and regrets with those of the dear ones in the desolate home.

"*Resolved*, That we attend his funeral in a body, and wear the usual badge of mourning, and that a copy of these resolutions be transmitted to the family of the deceased."

OFFICIAL LIST

OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U.S. ARMY, FROM JULY 1 TO JULY 13, 1874, INCLUSIVE.

RANDOLPH, J. F., SURGEON.—Assigned to duty as Post-Surgeon at Camp Robinson, Wyoming Territory. S. O. 90, Department of the Platte, July 3, 1874.

BYRNE, C. C., SURGEON.—Granted leave of absence for six months, with permission to go beyond sea. S. O. 145, A. G. O., July 3, 1874.

BROWN, J. M., ASSISTANT-SURGEON.—Assigned to duty as Post-Surgeon at Plattsburg Barracks, New York. S. O. 131, Military Division of the Atlantic, July 8, 1874.

VICKERY, R. S., ASSISTANT-SURGEON.—Assigned to duty at Little Rock, Ark. S. O. 102, Department of the Gulf, July 6, 1874.

O'REILLY, R. M., ASSISTANT-SURGEON.—Assigned to duty as Post-Surgeon at Fort D. A. Russell, Wyoming Territory. S. O. 90, c. s., Department of the Platte.

HALL, J. D., ASSISTANT-SURGEON.—Leave of absence extended thirty days. S. O. 147, A. G. O., July 7, 1874.

SATURDAY, JULY 25, 1874.

ORIGINAL COMMUNICATIONS.

ON THE RELATION OF ELECTRICITY TO THE PAIN OF HERPES ZOSTER.

BY A. D. ROCKWELL, M.D.,

Electro-Therapeutist to the Woman's Hospital of the State of New York.

HERPES ZOSTER, if not the most persistent, is, without doubt, attended by the most excruciating pain of the various neuroses of the skin. Whether its seat be the head, the trunk, or the extremities, the associated pangs are sometimes almost beyond human endurance.

"Imagine," says one of its victims, "the marrow taken out of the bones of your arm, a rough towel threaded through them, and two devils at work with all their strength at each end of the towel sawing it backwards and forwards: that is what the pain is like." Herpes is now generally regarded as subordinate to the existence of a neuralgic or rheumatic diathesis, and as originating in any cause which weakens the vigor of a nerve-trunk or its cutaneous branches: hence it would not be unreasonable to suppose that electricity in some one of its forms might prove of service.

The teachings of experience so clearly attest its value in this complaint that I cannot hesitate to put on record the following cases, in all of which, without exception, the treatment adopted was entirely successful. The disease, it is true, runs an acute course, and, as a rule, recovery more or less complete follows in the course of a few weeks, but it is none the less incumbent to relieve, so far as possible, the acute sufferings that attend it. Local applications are of little avail, and the latest considerations in regard to allaying the neuralgia of zoster do no more than recommend the administration of opiates and the bromides.

The first two cases which I briefly record occurred in that part of the body—viz., the trunk—which is said to be the most frequent seat of the disease. The succeeding three are of somewhat greater interest, because of the comparative infrequency with which such cases are met.

ZOSTER THORACICALIS—TREATMENT BY THE FARADIC CURRENT.

Case I.—Jane A., a dispensary-patient, aged 7 years 6 months, had suffered for several weeks from febrile symptoms and anorexia, and finally erythematous patches appeared on the chest and right side. The eruption increased and rapidly extended, until the thorax was nearly encircled. The pain from which the child suffered was very severe, and for forty-eight hours it had been continuous. I employed general faradization (mildly), and was rewarded by an immediate relief of the neuralgic pains.

Four similar applications were subsequently given,—one on each alternate day; but there was no return of pain, and within ten days the eruption, which resembled aborted vesicles, had quite disappeared.

ZOSTER SACRALIS—TREATMENT BY THE FARADIC CURRENT.

Case II.—I was called, December 3, 1873, to see a gentleman aged 34, who was suffering from an herpetic

eruption over the region of the sacrum. The vesicles extended from the hip to the sciatic notch on the right side, and covered a narrow tract along the outer portion of the thigh, with clusters here and there to the external malleolus. The accompanying neuralgic pain was quite as severe as in the preceding case, and simulated actual sciatica. I placed the foot of the patient on a copper plate, to which the negative pole was attached, and with a mild faradic current brought the whole hip and limb under the electrical influence. The effect was most grateful, and the relief afforded immediate.

The same method was repeated a number of times, and although the patient occasionally experienced twinges of pain, they were of little severity, and within a week ceased to annoy him.

ZOSTER FRONTALIS—TREATMENT BY THE GALVANIC CURRENT.

Case III.—A lady aged about 60, and sent to me by Dr. C. R. Agnew, had suffered long and severely from zoster of the forehead and face. Acute and persistent neuralgia supervened, resisting all attempts at permanent alleviation. The galvanic current was locally and centrally applied, and resulted, in a few sittings, in relieving in a good measure the neuralgic pains. Ptosis of the right eyelid remained, however, in spite of the treatment by galvanization. Three local applications of the faradic current approximately restored the lost muscular power.

ZOSTER FRONTALIS—TREATMENT BY BOTH FARADIC AND GALVANIC CURRENTS—ALLEVIATION OF PAIN ONLY BY THE GALVANIC CURRENT.

Case IV.—Mrs. L., aged 39, consulted me on June 10, 1874, and gave the following history of her case. Two weeks prior, her attention was called to a small vesicular eruption on the left forehead, directly over the course of the supra-orbital nerve. Similar eruptions quickly followed, thickly studding the side of the head and face, and accompanied with much pain. A homoeopathic physician had had the case in charge, and had succeeded in temporarily relieving the neuralgia only by the administration of morphine. When the patient fell under my observation she was suffering more than at any previous time, and, rather because of convenience than choice, I gently applied the faradic current to the affected and surrounding parts. It caused neither during the application nor subsequently any special modification of the distress. On the following day I resorted, as I should have done at first, to the constant current, making the applications locally and by the central method, and in less than ten minutes the intense agony of the patient was almost completely relieved. She passed a very quiet night, but in the morning complained of some distress over and in the right eye and temple. She was immediately relieved by a second application, after which she was subjected to treatment several times, although she suffered but little if any, and rapidly progressed towards recovery.

ZOSTER FRONTALIS—TREATMENT BY THE GALVANIC CURRENT.

Case V.—A third case of zoster frontalis, in the person of a female aged about 35, fell under my observation on the 2d of June last, through Dr. Beard, who transferred it to my care.

The lady, who was a patient of Dr. Oliver White, first observed a slight eruption over the right eye. This rapidly spread until the whole side of the head and face to the angle of the mouth was involved. The associated neuralgia was of the most excruciating and intolerable character. Dr. L. Bulkley was called in consultation, and advised the constant current, a few applications of which rapidly and effectually relieved the patient of all pain, and greatly hastened recovery.

It will be observed that of the above cases the first two, in which the eruption was confined to the body, were relieved by the faradic current; and that the three following (herpes frontalis) yielded to the galvanic current.

The differential indications for the use of the two forms of electricity, although now tolerably well understood, are far from being reduced to fixed laws. In the matter of the relation of electricity to pain especially there is a wide diversity of opinion, and while there can be no doubt in regard to the general superiority of galvanization to faradization in the relief of pain, there is a manifest tendency to underrate the value of the latter in this respect. Its boundaries of usefulness are not nearly so narrow as might be supposed from much of the writing that has lately appeared on the subject; and it is surprising that any one who has had much experience in electro-therapeutics, and whose observations have been directed with any degree of care, should relegate the use of the faradic current in cases of pain to purely hysterical and pseudo-neuralgic conditions, and account for the *rationale* of its effects solely on the principle of counter-irritation. It does not, however, come within the scope of this short paper to discuss the relation of electricity to pain in general. I would merely point out what seem to me legitimate conclusions from the above experience in the treatment of herpes:

1. That the pain of herpes, no matter where the seat of the eruption may be, is generally susceptible of speedy and effectual relief by the use of the galvanic or faradic current.

2. That when the eruptions take place on the head the galvanic current alone has power to relieve the pain.

3. When the disease is confined to the trunk or the extremities, the faradic current will relieve pain and hasten recovery, and is preferable to the galvanic.

CHOLERA INFANTUM.

BY HARVEY L. BYRD, M.D.,

Professor of Diseases of Women and Children in the College of Physicians and Surgeons of Baltimore, Md.

THIS terrible scourge of infancy and childhood is carrying large numbers of the young and tender ones of this community to their long homes, and such is the extent of its ravages that it might be said with propriety of language to prevail at this time as an epidemic in our midst.

Baltimore, hygienically considered, is probably the equal in all, or at least very many, respects to her most favored sister-cities; but, while this is the case, the hand of the destroyer occasionally falls heavily upon her, and she is then called upon to mourn the loss of those she cannot rescue from the embrace of death. Since the advent of summer the mortality has been considerable among infants and children one to three and four years old, but it is chiefly

within the last three weeks that our mortuary tables exhibit a fearfully large proportion of death from cholera infantum. Within this period there has been not only a steady but an alarming increase in the death-statistics from this generally intractable and fatal malady. After resorting to the remedies most in vogue in the treatment of *summer-complaint*, such as calomel in minute and moderately large doses, alone and in combination with Dover powder, chalk, charcoal, etc., bismuth, magnesia, pepsin, tannic and gallic acids, acetate of lead, alum, nitrate of silver, creasote, pyroligneous acid, laudanum, etc., etc., alone and in various combinations and mixtures, with indifferent or unsatisfactory results, even when strict attention was given to diet, fresh air, bathing, stimulants when called for, etc., it was finally decided to adopt a plan of treatment with special reference to an alterative action on the blood; at the same time giving strict attention to the skin with a view to the elimination of the poison, as far as might be, by this organ.

Accordingly, with this leading object in view, namely, an appeal to the blood primarily, sulphite of sodium and aromatic sulphuric acid were prescribed internally, and tepid or cold alkaline baths, according to indications, ordered externally, to which whisky or brandy was added when required.

One grain of the sulphite, with four drops of paregoric, was given in gum-water every two hours, to a child one year old, and the dose doubled for a child two years old, increasing or lessening it according to age and the anodyne effects of the paregoric, thus:

℞ Sulphite of sodium, grs. xvi;
Pulv. g. acac., grs. xii;
Tinct. op. camph., fʒi;
Water, ʒij.—M.

Sig:—One teaspoonful every two hours, to a child one year old, shaking the phial before using. One drop of elixir vitriol in three teaspoonfuls of iced water was given, three times a day, to a child one year old, and the dose increased one drop for each year and lessened to one-fourth or one-half drop when below one year of age. A tepid or cold bath, rendered alkaline with an ounce or more of carbonate of sodium, potassium, or common salt, was used morning and night. In addition to the foregoing remedies, aromatic cataplasms were ordered, and kept applied over the entire stomach and abdomen. Cow's milk and farinaceous articles of food not to be allowed, and scraped or finely-chopped beef, or lamb, raw or but partially cooked, or essence of beef (to which a small portion of brandy is to be added when required by the feebleness or prostration of the patient), used as much as practicable as nourishment. Wine-whey allowed freely in the second stage of the disease, when it agrees with the patient. Infants were allowed the mother's milk, or that of a healthy wet-nurse, and fifteen to twenty drops of lime-water three or four times a day when the milk disagreed. This plan of treatment has been pursued for the past two weeks, with complete success. In a small proportion of cases, quinine, in appro-

priate doses, was also administered when a tendency to periodicity was observed.

Several of our confrères have been advised of this plan of treating cholera infantum as it exists in this city, and are satisfied with the results. It is proper to state that all the cases of the disease that have been treated thus far by the writer have been among the well-to-do and better classes of the community. Long experience in the treatment of epidemics of various kinds, particularly those of yellow fever, cholera, cholera infantum, etc., has satisfied your contributor that no single plan of treatment, however successful at one time, can be relied upon in all epidemics of the same kind, nor during the same epidemic in all cases; but he feels, nevertheless, that the demands of humanity and duty to a common profession conspire to prompt this communication to the readers of the *Medical Times*, so that such use of the remedies may be made in their cases as they may think proper or expedient in the future.

The course of treatment above detailed having thus far met the reasonable expectations of all the parties interested, it is devoutly to be hoped that no such modification or important change in the character of the prevailing epidemic may take place during its continuance as may render it less efficacious or successful in the future than it has proven up to the present. On a subsequent occasion the writer may venture to give publicity to views and opinions he now entertains on the causes and pathology of this indigenous and fearfully destructive enemy of the Caucasian race, as found in the larger cities of this continent.

BALTIMORE, July 9, 1874.

TWO EXPERIMENTS UPON THE INFLUENCE OF LARGE DOSES OF QUININE UPON PREGNANT ANIMALS.

BY H. C. WOOD, JR., M.D.

THE subject of the uterine action of quinine is of the greatest practical importance, and is certainly in a very unsettled state. There have been very few experiments with it upon pregnant animals published, and the opportunity for such trial of it does not offer very frequently. For these reasons I have thought the following experiments are worthy of being recorded, and offer them without further comment.

Experiment I.—A female cat in a very advanced stage of pregnancy, but evidently not quite at full term. At 12.30 P.M. twenty grains of quinine were injected into the cellular tissue of various parts of the body. At 1 P.M. the cat offered no symptoms worthy of remark. At 2 P.M. she was seen by my assistant, and was alive. At 4.30 P.M. I found her dead and rigid. She had not aborted, and there were no indications of any disturbance of the genitalia.

Experiment II.—A cat, apparently at the end of her pregnancy. At 2 P.M. ten grains of quinine were given hypodermically. The next morning the cat was seemingly in exactly the same condition as before the injection, and was used for another experiment.

NOTES OF HOSPITAL PRACTICE.

PENNSYLVANIA HOSPITAL.

SERVICE OF J. AITKIN MEIGS, M.D.

Reported by FRANK WOODBURY, M.D.

TYPHILITIS AND FECAL ABSCESS.

THE following are the notes of a case admitted to the Pennsylvania Hospital during the service of Dr. J. Aitkin Meigs, by whose kind permission the case is reported.

In addition to the interest ordinarily attached to cases of perforation of the vermiform appendix, this case possesses some special features worthy of remark, in that there was an almost entire absence of symptoms up to the onset of collapse, and no clue could be obtained by whose aid a diagnosis could be established or rational treatment instituted.

The case was No. 629, laborer, æt. 23, single, born in Saxony, and was admitted to the men's medical ward July 7, 1873. The following history was obtained from those who brought him. He had apparently been in ordinary health until two days before admission. He then complained of pains in his back and abdomen, loss of appetite, and weakness, but continued at his work until noon of the day of admission, when he fell to the floor, without premonition, in a state of syncope. On regaining consciousness, presently, he commenced to vomit. This vomiting persisted, his stomach even rejecting ice-water, which he constantly requested to quench his burning thirst. His comrades now decided that he was sick, and brought him in a wagon to the hospital.

When admitted, his knees refused to support him as he was assisted to bed, and he was mildly delirious. He babbled of green fields and of cool streams, and wanted to bathe in the clear water. But he was easily aroused, for, being asked a question in German, he indignantly requested that he might be addressed in English, curtly coupling it with the information that he had been long enough in the country to understand the language.

His decubitus was dorsal, without flexion of the limbs. The face was cadaverous, eyes sunken, nose thin and pinched, complexion sallow, lips bleached, all suggesting collapse. The pulse was slow, somewhat irregular, moderately full and compressible. Breathing irregular and sighing. The surface of the body was cool and clammy. The vomiting after admission was simply by regurgitation, the fluid flowing from his mouth without effort or retching. He did not complain of pain anywhere, but suffered principally from thirst. His bowels were constipated.

As he was apparently sinking, some hot whisky and a stimulating enema were directed to be given, and heat applied to the extremities; but he died in less than half an hour from admission.

At the autopsy, the lungs were found to be normal. The heart contained a fibrinous, "chicken-fat" clot. The left ventricle was contracted; the semilunar valves were normal, but both the mitral and tricuspid leaflets were thickened, and bound down by old inflammatory adhesions. Liver small, dense, and in its external appearance was bluish like the spleen. Internally they both were dense, and contained but little blood. Gall-bladder distended with yellow bile. The kidneys were small, capsules adherent, no morbid condition noticed. In the peritoneal cavity was a quantity of offensive yellow pus and a serous fluid. The peritoneum was discolored, the omentum thickened, and the small intestines bound together by bands of recent lymph. The appendix vermiformis presented an extremity made

patulous by ulceration, and was the centre of a large abscess, which had been limited by adhesions, but had recently burst into the general peritoneal cavity. In this abscess two small bodies were found, and a third was still in the embrace of the appendix. These strongly resembled, and at first were pronounced to be, cherry-stones, but on section they looked more like allspice or juniper-berries.

They were sent to Dr. J. G. Richardson, who, after microscopic examination, pronounced them to be small masses of fecal matter.

TRANSLATIONS.

INTRAVENOUS INJECTION OF CHLORAL IN SURGICAL OPERATIONS.—M. Bouillaud read before the Académie des Sciences (*Gaz. Méd. de Paris*, May 16, 1874) an account of the following operation recently performed by M. Oré, in which chloral injected into the veins was the anæsthetic used. The patient, who was about to suffer resection of the calcaneum, had a solution of chloral (of the strength of one part to three of water) injected slowly into the radial vein of the right arm.

By the time three drachms had been introduced, the patient declared that he felt very sleepy. The injection was pushed until five and a half drachms of solution (about 115 grains chloral) had been introduced, when the patient suddenly fell into a profound slumber, accompanied by almost cadaveric rigidity.

The time required to produce this effect was about ten minutes. The operation, involving the usual incisions, required about twenty-five minutes for its performance.

During the whole of this time the patient slept calmly, made no cry nor complaint, while the perfect immobility of the limb denoted complete annihilation of sensibility. Respiration continued calm and regular, and showed none of those spasms of asphyxia which were observed when similar injections had been used in tetanic cases.

When the operation was finished, the interrupted current from a strong battery was used to restore the patient to consciousness, one pole being placed on the side of the neck and the other over the epigastrium. Under the electric influence the respiration became freer, and in a few moments the patient sat up and conversed, though wildly, as if intoxicated. This condition lasted an hour, followed by floods of tears. Shortly after, he sank into a natural sleep, and waked later in the day in his usual condition.

M. Oré's conclusions are as follows: 1, a solution of one of chloral to three of water is sufficiently strong for the purpose of intravenous injection; 2, the injection should be made after direct puncture, without laying bare the vein, in order to avoid all risk of coagulation or phlebitis; 3, the injection should be made slowly, so as to test the idiosyncrasy of the patient; when sleep is produced it is unnecessary to continue the injection, for the anæsthesia will persist in a manner never brought about by chloroform; 4, the operation terminated, it is possible, by means of electric currents, to cause the condition of immobility to cease on the instant. The surgeon should have at hand from the beginning an electrical apparatus in good working order. If the anæsthesia produced by intravenous injections of chloral be applicable to surgical operations, it will be found exceptionally advantageous in operations of long duration, such as resections and ovariectomy.

A. V. H.

HERPES ZOSTER FOLLOWED BY INTERCOSTAL NEURALGIA AND LOCAL SWEATS.—At a recent meeting of the Société de Biologie (reported in the *Gaz. Méd. de Paris*, May 16, p. 258) M. Ollivier communicated the notes of a very interesting case recently under his care. The patient, an old man, had suffered from an attack of herpes zoster on the right thorax, running on to ulceration about a year previous to his admission to the hospital. Two months subsequent to this attack he began to experience lancinating pains in the chest on the affected side, coming on at intervals at first, then becoming almost continuous and more severe. The neuralgia affected the sixth, seventh, eighth, and ninth intercostal spaces. Treatment consisting of morphia, dry cups, blisters, etc., was unavailing.

When admitted to the hospital, a year after the onset of the disease, he seemed in tolerably good health to all appearances. A few scars on the right side of the chest showed the former locality of the eruption. Persistent lancinating pain still existed in the locality referred to; pressure at any point in the intercostal spaces caused severe pain. Abundant sweats were observed over the whole affected region, becoming more marked during the neuralgic attacks.

Some months later, the patient began to experience still more severe pain, localized at the point of emergence of the intercostal nerves of the sixth space; the skin became immovable over the affected side, and the patient's general surface assumed a sallow hue. He lost flesh from this time rapidly, and died rather suddenly after having been under observation about a year.

No physical signs had been observed in the chest excepting great faintness of the respiratory murmur and a want of mobility on the affected side. The post-mortem examination showed extensive carcinoma of the pleura and lung on the right side, with similar degeneration of the intercostal nerves.

GASTROTOMY IN LESIONS OF THE STOMACH AND INTESTINES.—The *Gaz. Méd. de Paris*, Nos. 17 and 20, 1874, gives extracts from an article on this subject by Dr. Boinet in the new *Dictionnaire Encyclopédique*. Dr. B. gives a number of cases illustrating the various lesions and methods of operation, particularly in cases when foreign bodies have been swallowed. He maintains that operations performed on the stomach are not necessarily fatal nor resultant in fistula; sutures may be used with success. Death has frequently occurred from the escape of alimentary or other matters into the abdominal cavity, an accident which may be avoided by using the same care as in an ordinary case of ovariectomy.

Dr. B. concludes that in cases when such foreign bodies as forks, etc., have been swallowed, operative interference is strongly to be advised. He also gives some practical directions in regard to incisions, sutures, etc.

A. V. H.

TROPHONEUROSIS.—M. Lancereaux (*Gaz. Méd. de Paris*) read before the Société Méd. des Hôpitaux at a recent meeting the notes of a case of exfoliative dermatitis of the extremities following an affection of the nervous centres, with painful irradiations in the diseased parts. The patient, a woman 37 years of age, had suffered from right hemiplegia with aphasia, brought on by painful emotion. After lasting some months, the affection became somewhat ameliorated, and at the end of a year only a certain feebleness remained, with some alteration of vision. About this time she was attacked by constricting pains around the waist, and pains in the continuity of the limbs, knees, and feet, accompanied by nutritive disorders. At the time of her admission to the hospital she had also paralysis of the third pair. The pains in her limbs were sharp and lancin-

ating, and were more severe when she attempted to walk. Tactile sensibility and sensibility to pain were intact.

At the same time that these nervous phenomena were being developed, certain alterations in the skin of the extremities were manifested. The skin of the plantar and dorsal surface of the feet became red, infiltrated, and covered with white scales somewhat resembling those of psoriasis. The toe-nails became lengthened, and the epidermis upon the toes much thickened. In some places small fissures covered with yellow crusts might be perceived. The alteration was symmetrical, but more developed on the right than on the left leg, which later became the seat of more painful attacks, while the cutaneous alterations grew here more decided. There appeared on the right leg at the same time an erythematous patch, smooth, uniformly red, accompanied by tumefaction and heat, sore to pressure, and offering, in a word, the characters of an erysipelas or rather of an area of angioleucitis. In addition, the inguinal glands were tumefied and painful. This patch disappeared after a few weeks, leaving after it a sallow-gray tint of the skin, which was covered in this place with scales and remained thick and hard. Soon after, an eruption resembling syphilitic psoriasis appeared on the right wrist and palm of the right hand; afterwards an eruption of similar patches appeared on the left wrist. In spite of bromide of potassium, arseniate of iron, etc., the disease progressed, the appearances on the skin extending up the legs and arms, the lymphatic glands themselves participating in the morbid process. The patient subsequently died, but no post-mortem examination was obtained. The hybrid nature of the skin-disease and its *pari-passu* progress with the paralysis led M. Lancereaux to conclude their intimate connection.

A. V. H.

THE INFLUENCE OF ANÆMIA ON THE NUTRITION OF THE MUSCULAR TISSUE OF THE HEART (*Virchow's Archiv*: Dr. Leopold Perl).—When hemorrhage is sudden and profuse, death occurs from paralysis of the vital nerve-centres, due to a want of sufficient oxygen to enable them to continue their functional activity. In cases of chronic anæmia which are due to repeated losses of blood, part of the symptoms which occur, and sometimes the fatal issue, are to be attributed to this same cause. The explanation of another train of symptoms must be looked for in the altered relations in regard to their relative densities between the tissues and the blood. From this results œdema of various parts, and among those in which œdema produces the most serious results are the lungs and brain. A third group of symptoms, which has not been adequately studied until quite recently, comprises such as result from fatty degeneration of parts of the circulatory system.

Some years ago Virchow noticed that in the variety of anæmia to which the name chlorosis is given there was an incomplete development of the blood-vessel system, and, further, that there was frequently in these cases some fatty degeneration, which was more particularly noticeable in the muscle of the heart and in the internal coat of arteries.

Gusserow has quite recently published the results of his observations upon the hearts of several women who suffered from the anæmia of pregnancy in a marked degree, and he found, as a constant companion of other alterations, some fatty degeneration of the substance of the heart. In numerous cases of anæmia of high grade, occurring for the most part in young females, to which the name "progressive pernicious anæmia" was given, in addition to the many symptoms of an altered state of the blood which were noted during life, at the autopsies of such cases as died under observation a similar state of the cardiac tissues was found.

Ponfick, who has had excellent opportunities of examining cases in which this connection of anæmia and fatty heart co-exists, has established the fact that an analogous degeneration occurs in the hepatic and renal cells, and in the cells of the tubular glands of the stomach. Dr. Perl claims that this degenerative process has a general signification, and regards the alterations which are noticed in the heart as but one result of a general process which results in similar degenerations in other organs; and in support of this view he was able to show the existence of a high grade of anæmia in almost all cases in which the characteristic fatty degeneration was found.

In 92 per cent. of his cases he was able to assign as a cause for the appearances seen at the autopsy either some chronic and exhausting disease, as typhoid fever, some affection of the digestive tract, by which absorption and nutrition were interfered with, or, finally, repeated losses of blood. To establish this last point, the connection between repeated losses of blood and fatty degeneration in particular organs, but more especially in the heart, Perl performed numerous experiments upon dogs. In choosing dogs for the subjects of his experiments he was obliged to draw his conclusions from the conditions observed in the muscular tissue of the heart, for in animals of this species which are apparently in good health it is not uncommon to find fatty degeneration of the parenchyma of the liver and kidneys, while the muscle of the heart is rarely altered and the transverse striæ of the muscular fibre are distinctly marked. Before commencing the experiments, and after the bladder and rectum had been emptied of their contents, the dogs were carefully weighed. A superficial vein was then dissected out with as little disturbance as possible to the surrounding tissues, a ligature was applied, the vein cut, and a sufficient quantity of blood allowed to escape. The animals were divided into two classes, from one of which larger quantities of blood were drawn at longer intervals, while from the second smaller amounts were taken, but more frequently. From those of the first class, at intervals of five to seven days, blood to the amount of three to three and a half per cent. of the weight of the animal at the time of the experiment was taken, and from the others, every three to four days, one to one and a half per cent. of the weight. The condition of the heart was found at the examination made after the death of the animal to be very different in the dogs of the two classes mentioned above. In the majority of those which had been subjected to large losses of blood at prolonged intervals, the only palpable organic change which could be discovered was a well-marked disturbance of the nutrition of the heart, while in those of the other class in which the loss of blood had not been carried sufficiently far to be attended with fatal results, nothing of this kind was seen.

Perl thinks that the results of his experiments justify the conclusion that there exists a relation of cause and effect between anæmia and the changes of nutrition observed on the heart. The results of his experiments are strongly confirmed by the cases referred to above, in which fatty heart was found both in patients who had succumbed to chronic diseases, and in those who had been exhausted by repeated losses of blood.

W. A.

MEDICAL PROPERTIES OF THE AILANTHUS (*The Druggist's Circular and Chemical Gazette*, July, 1874).—Dr. Robert has found that in hot climates an infusion of the bark of the root of ailanthus is a valuable medicine in dysentery, giving results superior to those of ipecacuanha, calomel, and astringents, either with or without opium; it is also preferable to the treatment by milk.

THERAPEUTIC NOTES.

VAPOR OF HOT WATER IN THE TREATMENT OF CON-GENITAL ATELECTASIS.—Dr. Kjellburg (*Trib. Méd.*, 1874, p. 428) places the little patient in a sort of vapor-bath, which he makes by disposing of the bed-covers by means of hoops, etc., in such a manner as to form a sort of cell, into which the vapor from a vessel of boiling water is conducted. The temperature of this enclosed space should not range below 77° F. nor above 86°. The atmosphere should be frequently renewed.

In this hot and humid medium the respiration becomes much more free, the bronchial secretions no longer accumulate in the air-passages, the temperature of the body falls, and the appetite improves.

The duration of the bath, as well as the degree of humidity, varies according to the gravity of the case, and may be graduated accordingly.

Sometimes the treatment has to be continued during eight to twelve days. Dr. K. has cured by this means not only pulmonary atelectasis, but also various laryngeal and bronchitic troubles in infants at the breast.

INHALATIONS IN ASTHMA.—

R Ætheris sulph., pts. 30;
Acid. benzoic., " 15;
Bals. Peruvian., " 8;

or, according to another formula,

R Ætheris sulph., pts. 2;
Sp. terebinthinæ, " 15;
Acid. benzoic., " 15;
Bals. Peruvian., " 8.

Place the mixture in a vessel having a large opening; the warmth of the hand is sufficient to volatilize the materials, and inhalations may be used four or more times a day as occasion demands.

FOR PAINFUL HEMORRHOIDS.—

R Ext. hyoscyam.,
Pulv. saffron, aa ℥ijss;
Plumbi acetat., ℥i;
Glycerole of starch, ℥i.—M.

FOR CHRONIC ECZEMA.—

R Sodii carb.,
Oleum cadini,
Picis, aa ℥ss ad ℥i;
Axungiae, ℥vijss.—M.

TREATMENT OF GRANULAR PHARYNGITIS.—An extract from the *Bull. de Thérap.*, in *L'Union Méd. du Canada*, March, 1874, gives Dr. Cousin's method of treating this affection. Dr. C. states that general remedies suited to the diathesis should be employed as well as local applications. He prefers gargles to inhalations, excepting where there are laryngeal complications.

Tar-water, or water impregnated with sulphurous acid, may be employed, though Dr. C. prefers a solution of some simple saline, common salt for instance, with perhaps the addition of glycerin. Solutions of alum, he thinks, destroy the enamel of the teeth. If the inflammation has reached the naso-pharyngeal cavity, it will become necessary to use the nasal douche. The pharynx may be touched with small pledgets of cotton or lint, dipped in Mandl's solution of iodo-iodurated glycerin (one per cent.), or of pure glycerin.

In scrofulous ulceration of the throat, especially in phthisical patients, a solution of equal parts of chromic acid and water may be applied by the same method. The patient should gargle with some neutral fluid or water immediately afterwards, and the application should be made twice weekly.

CROTON CHLORAL IN NEURALGIA.—Croton chloral has been used by Dr. Jules Worms in various cases of neuralgia and other painful affections with considerable success. Dr. W. uses larger doses of the remedy than are usually administered. He thinks it inadvisable to be given hypodermically. The following formula resembles the one usually preferred by him:

R Croton chloral, ℥ii;
Glycerin.,
Aquæ, aa f℥i f℥vi;
Syrupi, f℥iv;
Ol. menth. pip., gtt. iii.—M.

Sig.—Tablespoonful every three or four hours.

ULCERATION OF THE NOSE IN SCROFULOUS CHILDREN.—M. Galezinsky is accustomed to treat ulcerations of the cutaneous surface generally in these cases by dusting them with calomel, with appropriate internal treatment. When similar ulcerations form in the nares, he recommends similar applications, or occasionally the following ointment:

R Hydrarg. ox. rub., gr. iv;
Camphoræ pulv., gr. iss;
Axungiae, ℥i.—M.

STYPTIC COLLODION.—

R Tannin, ℥ii;
Alcohol, f℥iv;
Ether, f℥xij;
Gun-cotton, ℥i ℥ii;
Canada balsam, ℥i.

Dissolve the tannin in part of the alcohol and ether, the Canada balsam in another part, and the gun-cotton in a third. The solutions are then mingled.

MILK IN THE TREATMENT OF CHRONIC DYSENTERY.—Dr. Barrett (*L'Union Méd. du Canada*, March, 1874), who has been studying for some time the action of milk in the treatment of chronic dysentery, adopts the following method of administration. The milk should be pure, without any admixture with water, and as fresh as possible. The patient placed upon this fluid as a diet should take absolutely no other nourishment, no other medicine.

The first effect noticed is the great abundance and fluidity of the stools; this is of short duration,—a few days at most. When the fecal discharges begin to be more solid, the administration of subnitrate of bismuth, with occasionally the addition of chalk-mixture, hastens the process. Occasionally, while using bismuth, in persons who have been enfeebled by long-continued discharges, certain scorbutic purpura-spots are observed: this symptom is best combated by the use of citron-juice. Should a bilious flux manifest itself later, mild cathartics, such as manna or the sulphate of sodium, may be employed.

Occasionally the milk may not be digested, and may show itself in the stools in a grumous form, indicating want of power in the digestive fluids. In this case pepsin (gr. v t. d.) will supply the deficiency and render the milk perfectly assimilable. Vomiting of the milk, which occasionally occurs, may be prevented by the same means. Of course, when convalescence sets in, care must be redoubled to prevent a relapse.

At first, condensed milk, white of egg, milk-soup, may gradually be brought into use; then boiled fish, eggs, and easily-digestible meats may gradually lead the way to the ordinary diet, the milk being continued throughout.

Every care should be taken to guard against infractions of diet. Occasionally, especially when the milk is poorly digested, lime-water may be added, in the proportion of one part to two or three of milk.

PHILADELPHIA MEDICAL TIMES.

A WEEKLY JOURNAL OF

MEDICAL AND SURGICAL SCIENCE.

The Philadelphia Medical Times is an independent journal, devoted to no ends or interests whatever but those common to all who cultivate the science of medicine. Its columns are open to all those who wish to express their views on any subject coming within its legitimate sphere.

We invite contributions, reports of cases, notes and queries, medical news, and whatever may tend to increase the value of our pages.

All communications must bear the name of the sender (whether the name is to be published or not), and should be addressed to Editor Philadelphia Medical Times, care of the Publishers.

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SATURDAY, JULY 25, 1874.

EDITORIAL.

THE ARMY BILL.

AS no doubt most of our readers know, during the last days of the recent Congress a bill was finally passed regulating some of the staffs of the army, and including the medical department. As the matter may have a personal interest to some of our subscribers, and must have a general interest to all, we extract from the *Congressional Globe* that section of the bill which relates to the medical department, adding also, by way of contrast, that portion which affects the ordnance corps. We call attention to the circumstance that in the latter the number of generals, colonels, lieutenant-colonels, and majors is to that of the lower grades as 18 to 36, whilst in the medical corps the proportion is as 55 to 150.

"Section 4. That the Medical Department of the Army shall hereafter consist of one Surgeon-General, with the rank, pay, and emoluments of a brigadier-general; one assistant-surgeon-general, and one chief medical purveyor, each with the rank, pay, and emoluments of a colonel; and two assistant medical purveyors, with the rank, pay, and emoluments of lieutenant-colonels, who shall give the same bonds which are or may be required of assistant-paymasters-general of like grade, and shall, when not acting as purveyors, be assignable to duty as surgeons by the President; fifty surgeons, with the rank, pay, and emoluments of majors; one hundred and fifty assistant-surgeons, with the rank, pay, and emoluments of lieutenants of cavalry for the first five years' service, and with the rank, pay,

and emoluments of captains of cavalry after five years' service; and four medical store-keepers, with the same compensation as is now provided by law; and all the original vacancies in the grade of assistant-surgeon shall be filled by selection by competitive examination; and the Secretary of War is hereby authorized to appoint from the enlisted men of the Army, or cause to be enlisted, as many hospital-stewards as the service may require, to be permanently attached to the Medical Department, under such regulations as the Secretary of War may prescribe. And the number of contract surgeons shall be limited to seventy-five on or before the 1st day of January in the year 1875; and thereafter no more than that number shall be employed.

"Section 5. That the Ordnance Department shall consist of one Chief of Ordnance, with the rank, pay, and emoluments of a brigadier-general; three colonels, four lieutenant-colonels, ten majors, twenty captains, sixteen first lieutenants; and all vacancies which may hereafter exist in the grade of first lieutenant in said Department shall be filled by transfer from the line of the Army: *Provided*, That no appointment or promotion in said Department shall hereafter be made until the officer or person so appointed or promoted shall have passed a satisfactory examination before a board of ordnance officers senior to himself."

It will be seen at a glance that no attention whatever has been paid to the memorial of the American Medical Association, and that two of the higher grades of the service have actually been cut down, there being only two lieutenant-colonels where there were formerly five, and fifty majors where there were sixty. The reduction in the first of these grades, it should be stated, however, is not quite so great as it appears, as one of the number has been promoted to a colonelcy. The only advance made by the bill, so far as we can see, is in throwing open the position of assistant-surgeon; and it is a question whether this is a real advance, since the opening of the doors is accompanied by the withdrawal of those inducements which affect most powerfully the best material.

As "example is better than precept," and as a personal illustration often brings the matter home to a reader, perhaps our friends Drs. Billings and Otis will not think we are using their names like a foot-ball if we state that the present bill delays their promotion about seven years,—*i.e.* they will have to serve about twenty years to become majors, and never can rise any higher.

Railing at the bill will, unfortunately, never change it, and the only true work of the present is to devise means to influence the next Congress. The past has shown that resolutions of Medical Societies are about as powerless in influencing legislation as a feather would be in sinking an iceberg. There is

one way in which, however, the profession could, if it would act unitedly, turn the next Congress topsy-turvy. Every member of that august body has his family physician, and is also well known by other doctors; now, if these medical men would as individuals make their best endeavors to obtain personal pledges from the Congressmen, the desired object would be achieved. The close, private, hand-to-hand grapple with a man offers the best and surest method of permanently altering his opinion. We shall never forget a scene in one of our legislative halls. A certain measure affecting the profession was, if possible, to be pushed through, and among our party was a veteran non-medical politician and lobbyist. The committee was to have a hearing before the assembled house in the evening, but our lobbyist insisted upon getting hold of the individual members previously, saying, "D—n this shooting into flocks! pick out your birds singly, and fetch them down one after another." The more we have seen of legislative bodies, the more we have been convinced of the wisdom of this advice.

Of course, since the law directs it, the vacancies among the assistant-surgeons will be filled. We understand that there are fifty-six of them, and that an examining board will convene at New York about the 1st of August, and also that another board will meet at San Francisco either simultaneously or or at a somewhat later date.

HOSPITAL SUNDAY has recently been tried in Boston, and a little over thirteen thousand dollars was subscribed during the day. In London, the result of this year's anniversary is stated to have been a little larger than the amount subscribed at the corresponding date last year. To July 1, £26,600 had been reported. We should very much like to see the plan tried here, but unless the support of the whole profession can be obtained it seems to us useless to expect any good. Very possibly the sectarian nature of many of our institutions would be a barrier.

DR. E. S. GAILLARD has started a new journal, entitled *The American Medical Weekly*. The *Northwestern Medical Journal* has been discontinued.

THE Council of the British Medical Association has decided in favor of a grant of two hundred pounds to be spent in original researches.

CORRESPONDENCE.

TO THE EDITOR OF THE PHILADELPHIA MEDICAL TIMES:

I SEE by your issue of July 11 that my friend Dr. Bernardy claims priority in the use of *chloral* in *puerperal convulsions*. I must dispute his claim. In October, 1871, I employed this remedy successfully for the relief of convulsions induced by excessive drinking. At the time I mentioned the fact to Dr. William F. Patterson, and suggested it as the remedy for puerperal convulsions.

On the 26th of October, 1871, Dr. Patterson summoned me to meet him in the case of Mrs. T., on Federal Street. He had, in pursuance of the suggestion as above, been employing the chloral, but in small doses, and I believe the article was of an inferior quality.

We agreed to procure a reliable supply from a good source, and increase the dose, giving it at intervals of one hour. So soon as she came under the influence of the chloral, the attacks ceased, and she rapidly convalesced.

Since that time, in a number of cases, both in consultation and in my own practice, I have continued to employ the chloral, and with the most complete success.

I publicly expressed my earnest belief in the virtues of this drug in cases of puerperal eclampsia on the occasion of my address on Obstetrics before the Medical Society of the State of Pennsylvania, at Easton, May, 1874.

Very respectfully,

W. B. ATKINSON, M.D.

PHILADELPHIA, July 13, 1874.

PROCEEDINGS OF SOCIETIES.

PHILADELPHIA COUNTY MEDICAL SOCIETY.

A CONVERSATIONAL meeting was held Wednesday, April 22, 1874, at 8 o'clock P.M.

The PRESIDENT, DR. W. L. ATLEE, in the chair.

Dr. A. G. B. HINKLE read the account of a case of *hydrophobia*.

On the 4th of March, 1874, S. D., a car-spring maker, called at my office, stating that on the day previous, whilst working very hard and perspiring excessively, he had drunk largely of water. In the evening he felt greatly fatigued, and passed a restless, wakeful night. In the night he attempted to drink water, but found great difficulty in swallowing. On examination of his fauces I discovered slight local congestion of the parts, and, thinking the trouble might arise from it, I ordered him a saline purge; also twenty-grain doses of bromide of potassium every four hours. His pulse was then not more than 70 per minute; tongue slightly furred and whitish.

On the 5th I was summoned to see him. He had passed another sleepless night, and had attempted to drink water, but found it impossible to get it to his mouth, in consequence of the spasm that it excited; when he attempted to bathe his face he could not touch the water, from the same cause. Pulse about 80, and soft; tongue covered with a slightly brown-

ish fur; skin cool and somewhat livid, but dry; expression anxious; complained of pain in right arm from neck down to the finger-nails, and particularly of the right thumb. The temperature of right arm was higher than that of the left. He also had pain from back of neck extending to the pomum Adami, and a peculiar painful sensation in the region of the diaphragm and the scrobiculus cordis. The cathartic taken the previous day had not acted; the urine was scanty; there was frequent sighing; there was a sense of pressure upon the throat; the eyes were wild and sparkling at times; a retraction of the angles of the mouth simulated the sardonic grin; the face was at times suffused, then again somewhat livid. A current of cool air would produce spasmodic contraction of the muscles of face, pharynx, and respiratory organs generally.

I requested him to let me see him take a drink, and on pouring the fluid into the glass I observed that the noise it caused excited considerable spasm. The attempt to swallow was painful to witness, it causing him to rush to the door gasping for breath. He had taken but little nourishment during the past twenty-four hours, as that effort caused the same spasmodic symptoms as drinking.

I then cautiously inquired if he had ever been bitten by any animal, and learned that on the 30th of September, 1873, in attempting to catch a little dog that ran into the shop where he was working he had been bitten by it twice in the thumb of the right hand quite severely, but he had given no particular attention to the subject, the wound healing kindly in due time. What became of the dog we have not learned, as it escaped from its captors.

I then ordered a large enema of soapsuds and turpentine, which was given with some difficulty on account of the contraction of the sphincter ani muscles; a very slight fecal discharge followed. I then gave him one-third of a grain of sulphate of morphia hypodermically, to be followed in two hours by a suppository of two grains of the aqueous extract of opium. This had the effect of relieving him of the severe pain in the neck and arm to a great extent. I also painted the upper part of the spinal column with blistering collodion, which did not act.

Dr. William Welch saw him with me in the afternoon; the pulse was then about 86; he was suffering less pain, but his other symptoms were about the same. He had slept a little at short intervals.

In the evening Dr. Millick saw him with me; the pulse was about 90, and there was no further abatement of the symptoms. We gave another third of a grain of morphia hypodermically, and an enema of three ounces of *lac assafoetidae*, with half an ounce of tinct. digitalis.

On the morning of the 6th I found him no better, he having slept none at all; the pupils were somewhat dilated; the pulse 100. At the suggestion of Dr. Stetler we tried the effect of the inhalation of a mixture of four parts of ether to one of chloroform, with the view of relaxing the spasmodic condition. Of this he had scarcely taken half a dozen inhalations when he sprang from his resting-place and became very violent, rushing out of the door and down into the cellar, and requiring considerable effort to force him back to his former position. This stage of excitement continued during several hours, but gradually subsided by evening. During this stage he foamed greatly at the mouth, and at times grew very livid in the face and about the extremities; his pulse rose to 120.

In the evening Drs. R. S. Kenderdine, G. M. D. Peltz, Lewis Adler, and Rudrow, saw him with me. The pulse was feeble, but increased to 135; the skin cool and moist. He was more rational, and the spasms had almost subsided. I gave half a grain of morphia hypo-

dermically, and painted the spine again with blistering collodion. On the morning of the 7th he had slept none; the pulse was 140, the skin cool and shrunken, the expression sardonic, the face livid, the capillary circulation very feeble. We gave him one drop of croton oil, to be followed by two grains of calomel every two hours; and, as the former blistering had no effect, I again painted his spine with a fresh sample that I knew to be reliable, but with no effect whatever.

In the afternoon his pulse was 140 in the recumbent posture, and in the upright position so feeble that we could not count it; the purgatives had not acted; abdomen tumid; had three more spasms during the day, and finally almost complete hemiplegia of right side.

At 9½ in the evening the pulse was fluctuating very much, so that it could not be counted. There was a general relaxation of the whole system. He was quite rational at times, and swallowed beef-tea quite freely, and even asked for a chew of tobacco. I gave him a large enema without effect, and afterwards gave forty drops of Squill's liq. opii compos., which caused a brief slight drowsiness; about 11 P.M. a feeble return of spasm for a short time occurred, and he then gradually sank until his death, at 2 o'clock in the morning.

From the commencement of the attack to its final close about four days elapsed. No post-mortem could be obtained.

We believed the case to be hydrophobia, and directed our efforts for temporary relief to the best of our abilities, and were gratified that we were instrumental in relieving him to a great extent of the pain, and partially also of the spasmodic condition. The primary wound did not show any indications of opening.

Dr. A. FRICKE said he had presented to the Society, some years ago, a paper on hydrophobia published in the Transactions of the State Medical Society, in which several cases were related. The incubation in one of the cases was two years; the ordinary time was six weeks. How could the poison slumber such a length of time and then wake up? The other case was sent to the hospital. Wunderlich relates the case of a woman bitten in her clothing. Mending her dress the next day, through an abrasion she took the poison. He mentions a case in which there was an incubation of twenty-seven years.

Dr. O'HARA remarked that syphilis remains long in the system. He did not see how this case could be distinguished from brain-disease. He did not think the fear of water a symptom, as it belonged to other disorders. Dr. O'H. asked whether vesicles appeared under the tongue. Trousseau had pointed them out as prodromes. In cases of brain-disease, as localized meningitis, etc., there were symptoms analogous to those described as occurring during hydrophobia. An enema would throw them into spasms.

Dr. STETLER saw this case about thirty-six hours after its onset. There appeared to be a great deal of hyperæsthesia when cold water or currents of cold air came in contact with the skin. Properly or etymologically speaking, he could not pronounce it a case of hydrophobia at that period, for on taking up a tumbler of water immediately in front of the patient, and presenting it to his (Dr. S.'s) lips, the patient remained unmoved. We also resorted to the expedient of placing his hands in a basin of warm water, and, although he moved them about in the water freely, there was no emotion of an unpleasant character. Was it then hydrophobia?

Dr. S. saw a reported case of hydrophobia four years since, but which was an undoubted case of tetanus, according to the testimony of the three physicians in attendance. The man had thrust his hand down the throat of a heifer that subsequently died, but not of hydrophobia. The impression got out early that it was

hydrophobia of which the man died, and it was impossible to remove it. The case occurred in very warm weather. The patient, after returning from church in a state of perspiration, very imprudently lay down on the lawn, was soon seized with symptoms of opisthotonos, and died on the fifth day.

Dr. BLACKWOOD reported the case of a woman who was bitten six years ago, in Huntsville, Alabama, under his charge. A rabid dog entered the camp, and, before being killed, bit the wife of the drum-major, and two dogs. The first bitten was one of the dogs, next the woman, and finally the other dog. The wounds in the woman's hand were thoroughly cauterized with nitric acid, and she has not been troubled yet with hydrophobia. Both dogs died in ten days, with rabies.

Dr. KEYSER mentioned a case that he had seen some eight or nine years ago, of a boy bitten, in which the wound was immediately burnt out with a lighted cigar by some one present, and, about an hour after, the wound was well cauterized with nitric acid. Never heard of his having hydrophobia afterwards.

Dr. ESHLEMAN cited the case of a relative bitten by a pet dog. The wound was excised and cauterized shortly after the injury. During sixteen years that he survived, no symptoms of the disease arose. The dog was pronounced rabid by a physician, and killed.

Dr. WELCH remarked that, through the courtesy of Dr. Hinkle, he had seen and examined the case related to-night, and, although he had never before seen a case of hydrophobia, believed such to have been the nature of the disease in this instance, since *dread of water* was the most prominent feature; that is to say, that every attempt to drink or handle fluids brought about a peculiar train of symptoms, most prominent among which were spasmodic action of the diaphragm, giving rise to hurried and jerking inspirations, and severe constriction about the throat, rendering deglutition extremely difficult. Two visits were made to the patient, one on the second and the other on the fourth day of the disease. At the first visit the patient was still conscious; the pulse was rapid and feeble; the complexion was sallow; there was occasionally slight twitching of some of the muscles of the face; there was general weakness; slight pain and numbness were complained of in the right arm (the thumb on this side had been bitten); and the gait of the patient was unsteady or staggering. But it was not until water was poured from a pitcher into a tumbler that the distinguishing features of the disease became manifest. This act immediately excited the peculiar train of spasmodic symptoms already referred to, all of which were aggravated by an attempt to swallow. When asked to take a drink, he reached for the tumbler with a tremulous hand; his respiration became at once exceedingly spasmodic, his face grew turgid and livid, and his eyeballs appeared prominent. After seizing the tumbler it seemed to require considerable effort to bring it to his lips, and when he had succeeded he made a determined effort to drink, but was able to swallow only very little of its contents. Under the excitement brought about by this futile attempt to swallow, he quickly set the tumbler down, and ran, in a staggering gait, to the door leading to the street, and, after standing there a few seconds, returned, stating that this act seemed necessary in order to get his breath. He soon became comparatively calm, when a basin of water was brought, and he was asked to immerse his hands; this also gave rise to a disturbance of the respiratory act, but to a less marked degree than the attempt to drink. The effect somewhat resembled that produced by stepping into a cold bath. The "hydrophobic slaver," spoken of by authors, was not observed. There was, however, a tenacious quality about the saliva, as was seen by the lips sticking together when parted.

At the second visit the patient had grown much weaker; he was unable to walk; the skin was congested, and of a livid hue; the pulse was very feeble, and so rapid that it was impossible to count it; there was delirium; partial paralysis of motion was observed on the right side, and sardonic smiles played over the countenance. Death ensued in about ten hours from this visit.

Dr. PAGE called the attention of Dr. Smith to a case which occurred in the Pennsylvania Hospital some years since, and said he knew one case in which the patient was smothered to death by his attendants.

Dr. H. H. SMITH, in reply to Dr. Page, stated that his recollection of the case referred to in the Pennsylvania Hospital, some twenty-five years ago, was that it was hydrophobia; being attended by violent spasms if a current of air blew on the patient, or water was poured out in his hearing, or an attempt made at drinking. There was also a collection of viscid saliva about the mouth and fauces, with constant efforts to hawk and spit. These symptoms followed the bite of a dog some time before. There was, however, a diversity of opinion in the diagnosis, some of the surgeons regarding it as a case of tetanus.

In reference to the bite of cats, Dr. Smith remarked that in one instance, in a mill in Delaware County, a cat, supposed to be mad, had bitten several persons. He saw three of these and cauterized the wounds, but never heard of hydrophobia attacking any of those bitten.

MEDICAL SOCIETY OF THE COUNTY OF ALBANY, NEW YORK.

SEMI-MONTHLY MEETING, MAY 13, 1874.

Dr. WM. H. CRAIG, President *pro tem.*, in the chair.

Dr. L. T. MORRILL reported the following interesting case of *pelvic cellulitis resulting in pelvic abscess*. Mrs. G., æt. 39, had had ten children and four miscarriages. About eighteen months before her death she was delivered at full term of a strong and healthy male child. For one month afterwards she suffered with severe pain over the pelvic region. Dr. Morrill at this time was consulted, and found her complaining with severe pain over the abdomen, which was tympanitic. Pulse 110. It was considered a case of peritonitis. Two weeks later her pulse had diminished to 90 per minute, and her abdomen was not so much distended. She had now a profuse diarrhœa. At the end of the next week the peritonitis had almost entirely subsided, excepting over the region of the left ovary, where the pain was intense, and the only relief she could obtain was from the use of hypodermic injections of morphia. Being naturally robust, her strength held out, and in the course of three or four months she was able to go about, and commence the use of the sewing-machine.

She now seemed to improve rapidly; when one night her husband came home intoxicated, and commenced abusing her, pulling her out of bed and kicking her several times over the abdomen. The next morning she had much pain in the abdomen, which was bruised and swollen. Fomentations of warm water and anodynes were prescribed to procure relief. She survived eight months.

Four months before death, on examination of the abdomen, a fluctuating tumor, the size of a goose-egg, could be plainly felt, which gave intense pain when touched. On examining her per vagina, the tumor could be felt projecting to the left of the cervix uteri, or occupying the space where the normal cervix should be found. During the examination the abscess broke, and pus continued to discharge through the vagina.

about one-half a pint in quantity. This seemed to diminish the pain. The odor from the discharge was extremely fetid, to correct which she used a vaginal wash containing carbolic acid. By the use of tonics and a supporting treatment, she seemed to improve for two weeks, when suddenly the pain, heat, and swelling returned, and for twenty days the abscess filled and enlarged until it discharged the second time. With an intermission of three weeks each time, it gathered and broke five times. During the last month she was much debilitated, and seemed to die from exhaustion.

Post-mortem, twelve hours after death. Rigor mortis marked. Body much emaciated.

Thorax.—Right lung in a healthy condition, with a few slight adhesions to the costal pleura, probably of long duration. Left lung was firmly adherent, and in the upper portion was a cavity which contained two ounces of pus. Heart small, walls firm, valves normal. Peritoneum and its layers presented some traces of inflammation. In the left inguinal region the folds of the peritoneum were strongly adherent to the parietes of the pelvis and intestines. Just behind the left broad ligament, and under the pelvic folds of the peritoneum, surrounding the left ovary, were found the walls of an abscess, a part of its contents having made its way downward back of the uterus into Douglas's *cul-de-sac*, and escaping into the vagina. The sac probably contained about twelve ounces. There were two distinct openings into the posterior walls of the vagina. The fimbriated extremity of the Fallopian tube of the left side was firmly included in the peritoneal adhesions. The right broad ligament, appendages, and attachments presented a normal appearance. The uterus was normal in size. On laying it open, well-marked traces of endometritis were found.

The liver was in a state of fatty degeneration. Spleen firm, and capsule covered with a thick, white fibrous deposit. Kidneys and other organs were healthy.

Dr. JAMES S. BAILEY mentioned the following case of *abscess in broad ligament, rupturing, causing peritonitis and death*, which had recently come under his observation. A stout German, primipara, who had been delivered by a midwife of a healthy male child twelve days before he was called. He could not learn that during delivery there was anything peculiar, excepting that labor was protracted, and that she had complained of a burning, smarting pain in the right iliac region during her confinement.

When Dr. Bailey saw her she was in a moribund condition, and died within twenty-four hours.

It then came to his knowledge that the father of the child, the man with whom she was living, was not married to her, and, although she had respectable friends and relatives living in the city, they were not acquainted with the circumstance; through this man he met with strong and determined opposition against making an autopsy, and it was not until he threatened to call a coroner that consent was obtained. On section, a high state of peritonitis was found; the intestines had become agglutinated and bound down by a thick coating of plastic lymph, with more or less free pus floating in the abdominal cavity.

In searching for the cause, it was found that an abscess had been ruptured, located within the folds of the right broad ligament of the uterus, which caused peritonitis and death.

Dr. B. remarked that he had noticed in Dr. Morrill's report that the abscess was located on the left side. He had also noticed among fourteen cases collected by Dr. T. Gaillard Thomas from different authorities, that when the broad ligament was the seat of purulent collections the left side was invariably attacked. In his case it was on the opposite side.

Dr. JAMES S. BAILEY also exhibited a *biliary cal-*

culus, egg-shaped, weighing five drachms lacking six grains (or two hundred and ninety-four grains), which he had recently taken, at an autopsy, from an old lady 76 years of age. Its presence had not been suspected by the attending physician, although in her lifetime it had occasioned considerable inconvenience. It entirely filled and distended the gall-bladder, leaving an impress of the crystals contained on one end of the stone. Its presence had at some time excited considerable inflammation, as the adjacent edge of the liver was drawn down and united by adhesive inflammation, and the gall-bladder was also strongly united to the duodenum. The ductus choledochus communis was elongated and dilated.

Dr. ALBERT VANDERVEER said that he wished to call the attention of the members of the Society to a class of *strictures of the male urethra* which have been too much overlooked. We can say the same here as in many other branches of surgery, that our methods of examination, instruments recently invented, etc., have enabled us to arrive at a more correct diagnosis than we were formerly in the habit of reaching.

Most of us have been taught that to have a case of stricture of the urethra we must have such diminution or contraction in the calibre of the canal that the attention of the patient himself is first attracted to his condition.

He is first to notice that his stream of urine is growing smaller, that it requires a longer time for him to empty his bladder, that after a short time he finds he is compelled to make quite an effort, that the force exerted is so great as to give him much anxiety. He comes to realize the fact, without consulting a physician, that he has a stricture, and a careful examination only goes to confirm his opinion.

Now, in contrast to some of the marked symptoms just noticed, we have a patient coming to us stating that some time within one, two, three, or five years, or longer, he has had an attack of gonorrhœa. He may be of the opinion that at the time he believed himself cured, or he may state that the doctor who attended him did not treat his case properly, and that ever since he has had an annoying gleet.

He is positive that he is passing a full stream of urine, will perhaps state that he does not have to get up at night to urinate, and will, when it is suggested, scout at the idea of his having a stricture.

He is now a young man of correct habits, and desirous of entering the marital relation, or he may have passed on to middle life, and now, after some excess or great anxiety, notices a condition that makes him anxious to know whether there is not some danger of his old disease returning.

Whatever is his condition in life, his case demands a most careful consideration. All are familiar with a class of cases that suffer from what is called gleet, and can readily call to mind instances where by some happy combination of remedies, as an injection or otherwise, the discharge has been relieved.

Other cases again, apparently of like character, have taxed our skill to relieve, and, while anxious to continue our exertions, we notice that our patient discontinues his visits to us and has consulted another physician, perhaps in like manner to discard him after a short trial of his treatment. Thus too frequently does the patient travel year after year from one physician to another.

As an illustration, Dr. Vanderveer presented the history of the following case. F. C., merchant, aged 26, temperate, had his first and only attack of gonorrhœa five years ago. The discharge was profuse and very irritating. He was under treatment a year, and then believed himself cured. Three months more elapsed, and, while enduring great fatigue, he noticed a slight discharge from the urethra on rising in the morning,

and a desire to empty the bladder occasionally during the night. He consulted many physicians, but only one had examined the urethra, and he only with a No. 10 elastic bougie. This passed into the bladder with comparative ease. It was believed that he had no stricture, and he used injections of lead, zinc, nitrate of silver, and various other astringents, also has taken medicine internally most of the time during the past four years. Dr. Vanderveer first saw this patient March 9, 1874. He appeared strong, and said he had nothing to worry about excepting this unpleasant gleet discharge, which is very scanty in quantity, but he is anxious to get married, and fears a return of his clap. Is sure that he is passing as large a stream of urine as ever, but admits that it requires more force and a somewhat longer time than usual to empty his bladder. An examination with a No. 8 bulbous-pointed bougie brought a drop or two of gleet discharge from near the meatus, but on being reintroduced it passed the entire length of the urethra, and was removed without detecting a stricture.

A No. 11 entered the meatus, but met with a decided obstruction one-third of an inch back. This was passed after some effort, and then on into the bladder. On removing it, no contraction could be detected excepting near the meatus as mentioned, and here a well-defined stricture, one of large calibre, can be diagnosed. The instrument was held by the stricture with sufficient firmness to hold the penis erect.

The patient was then convinced that he had a stricture, and was willing to submit to any treatment thought best to relieve him. The stricture and meatus were freely incised with Gouley's meatotome, and a No. 16 steel sound passed into the bladder; but little hemorrhage followed. He was taught and told to pass a large-sized black elastic olive-pointed bougie two and three times a week, and to report again. No internal treatment ordered.

He returned in three weeks, and said that the discharge had ceased, and that his mind was greatly relieved concerning his disease.

The largest-sized bulbous bougie failed to detect any remains of the stricture. He was ordered to continue the use of the elastic bougie occasionally.

If we had attempted to make out a diagnosis of this man's case according to the rules presented in many of the text-books of the present day, we should have failed. Sir Henry Thompson, with others, tells us that if a No. 8, 10, or 12 elastic bougie or steel sound can be passed the patient has no stricture. It is very evident that this cannot be the case, and also that we are not safe in our diagnosis when a gleet discharge is present unless we have made a thorough use of the so-called bulbous bougie. In searching after the location of a stricture that may be present, one point in our diagnosis of strictures of large calibre we are to remember: that every urethra is not of the same size.

An illustration will explain. A. S., treated for light stricture and discharged as recovered, May 1, 1873. A No. 16 steel sound had passed readily. He returned again in January, 1874, saying that, while he passed a good stream, and was not able to detect any gleet discharge, yet of late when he has urinated and about to return his penis he has noticed an unexpected dropping of urine, which from its soiling his garments has become very annoying. On examination, a No. 16 steel sound passes into his bladder, causing a little pain at the meatus.

By examining this case somewhat more carefully we find there is some trouble in introducing the large-sized bulbous bougie; the meatus is incised, and then we detect in the spongy portion of his urethra four well-defined strictures of large calibre, one-half inch from each other, all sufficiently well marked to retain a drop or more of urine. In the treatment of this case we

first tried Otis's dilating urethrotome, but succeeded best with Gouley's dilating urethrotome, and after a short time had the satisfaction of seeing the patient entirely relieved of all his troublesome symptoms,—the urethra admitting the passage of No. 17 and 18 steel sounds, and the largest-sized bulbous bougie being unable to detect any contraction of the canal.

In examinations of cases of gleet we should always bear in mind that the stricture of large calibre may become the tight, impenetrable one that the former is, treated with far better results, easier, and with less loss of life than the latter.

Dr. Vanderveer believed that all cases of gleet resolved themselves into two classes,—those complicated with stricture either of large or small calibre, and those where we have the urethra presenting points of ulceration after a severe attack of urethritis, and which, if neglected, ultimately lead to stricture.

In order not to detain the Society too long, Dr. Vanderveer only proposed to present a few cases to show the good resulting from gradual dilatation, a method always at hand and easy of application, especially if it be but a short time since the acute urethritis has occurred.

Case III.—September 1, 1872, G. J., small in stature, æt. 23, habits temperate, first attack of gonorrhœa two and a half years ago, and very severe, but recovering in three months; was treated with copaiba only. The second attack occurred eighteen months thereafter, but was not so severe. The treatment was the same as the first. A constant discharge has continued since. A No. 8 bulbous-pointed bougie detects a stricture one-half inch from meatus. Gradual dilatation with elastic bougie continued for three months, and finally used No. 15 steel sound. Internally used tinct. ferri with cantharides. Discharged August, 1873, entirely cured, with no relapse up to the present time.

Case IV.—April 10, 1873, W. J., æt. 22, temperate habits, has had two attacks of gonorrhœa, the last a year ago, since which time there has been a constant gleet discharge. Twice after severe exposure he has been obliged to resort to the use of the catheter to draw off his urine, which was introduced at such times with little trouble. Examination with a bulbous bougie reveals a slight stricture just back of the fossa navicularis; the remaining portion of the urethra appears healthy. Nos. 13 and 15 steel sounds were passed twice a week for a month, when the discharge entirely ceased, and has not returned up to this date,—August 15, 1873. His general health being good, no internal treatment was applied.

There are cases existing with points of ulceration in the urethra which we sometimes may have the good luck to locate correctly and treat by means of injections, but which can be more certainly and correctly located by means of the endoscope,—an instrument which should come into general use. The following affords a good example: D. D., æt. 40, intemperate, exposed to the vicissitudes of atmosphere day and night; first attack of gonorrhœa eighteen years ago, which was treated with copaiba, injections, etc. He was four months in recovering. After this, after exposure to cold the stream of urine became smaller, followed for a few days by a gleet discharge. Second attack two years ago, which was very severe, and attended with great pain and scalding; treated with copaiba and injections; was three months in recovering. The stream of urine became smaller, but there was no retention; was obliged to empty his bladder during the night. Third attack, four months ago, was very painful; the swelling and scalding were very aggravated; occasionally passed blood with the urine. The attack yielded to the use of copaiba and injections, but he could subsequently only after frequent attempts pass a

small stream of urine. Examination showed the urethra to be in a state of ulceration for five inches, and to be uniformly contracted and roughened. The introduction of a No. 2 elastic olive-pointed bougie was attended with considerable pain, and caused the parts to bleed. Tr. ferri and cantharides were taken internally. The occasional use of bougies up to No. 8 leaves the patient in a very comfortable condition. Discharge is quite scant. Introduction of No. 8 bougie causes no pain. The introduction of a larger-sized bougie causes much pain. He will not permit further treatment with urethrotome or divulsor. Eight months after treatment was commenced remains comfortable; uses No. 8 bougie occasionally: refuses further treatment.

Dr. T. D. CROTHERS read an interesting paper on "Impure Milk a Source of Disease," which did not, however, contain much at once of general interest and actually novel, and which we therefore omit from want of space, excepting the following:

A gentleman in this city bought a young cow to have pure milk for his child. The process of milking was, from ignorance, attended with much excitement and brutality, and the child was seized with brain fever, and never entirely recovered,—the direct result of feeding this poisonous milk, made so by the excitement of milking. A case was also related by him where a brutal, drunken dairyman supplied four families with milk. Those who used the most milk suffered all the season from gastro-intestinal irritation and a low tone of physical and mental health, due, without doubt, to the changed and poisonous condition of the milk from excitement.

Dr. J. B. STONEHOUSE spoke of a case reported in the *Edinburgh Medical Journal* for January, 1868, by Dr. Taylor, where scarlet fever prevailed in a dairy district and was propagated through the milk to the consumers. It was ascertained that patients and nurses, after having passed through the stage of desquamation, milked the cows, and it was supposed that the scales from the arms or from their dresses were shaken off in the milk, and thereby contaminated it.

In London, in a certain district it was observed that the milk tasted of creasote; the milk was stopped, and the circumstance reported to the authorities. It was ascertained that certain drains had been stopped up, and were cleaned out and disinfected with creasote; the creasote was absorbed by the milk from the air. Reference was also made to the paper on this subject in the *London Practitioner* of last year, when typhoid fever was communicated by the milk-vessels being washed with water contaminated with sewerage-water and dried in the sun without wiping. He also was of the opinion that milk proved unwholesome by absorbing noxious gases.

Dr. HALE could not see any propriety in feeding children on the milk from a certain cow. He was of the opinion that the product of a dairy where the milk from many cows was mixed would be more healthful to children. In cases of alleged milk-poisoning he believed more depended upon the lack of cleanliness in the nursing-bottle than on the impurity of the milk.

GLEANINGS FROM OUR EXCHANGES.

EXCISION OF THE ANTERIOR TARSUS AND BASE OF THE METATARSUS.—A NEW OPERATION (*The Edinburgh Medical Journal*, May, 1874).—Dr. P. H. Watson reports the case of a lad, æt. 19, who suffered from disease of the anterior portion of the tarsus. It was spontaneous in its origin, subacute in its progress, involving the articulations chiefly upon the inner side

of the foot between the cuneiform bones and metatarsal bones. The pain was such that he was unable to work or walk. Under rest, blistering, and constitutional treatment he improved until the plaster of Paris could be applied, but after the lapse of a few months the original symptoms returned with increased severity. No collective abscess had formed in the soft parts, but there seemed no reasonable doubt that suppuration had already commenced within the bones and joints involved. To amputate the foot seemed too severe a measure to be justifiable under the circumstances, and as it was obvious that all the disease was confined between the base of the metatarsus in front and the astragalus and os calcis behind, and that the excision of the scaphoid, cuboid, and cuneiform bones and bases of the metatarsal bones would secure the fulfilment of every requisite for sound recovery, the following operation was performed. After the application of the tourniquet to the lower part of the thigh, incisions between three and four inches in length were made in the outer and inner sides of the foot, that upon the outer side extending from the centre of the outer margin of the plantar surface of the os calcis as far as the middle of the metatarsal bone of the little toe, that upon the inner side from the neck of the astragalus to the middle of the re-established bone of the great toe. The soft parts were then carefully dissected off both surfaces and sides of the tarsus until the whole extent of osseous tissue to be removed was deprived of its soft coverings. A curved probe-pointed bistoury inserted between the soft parts and bones was then carried across the line of articulation between the astragalus and scaphoid and os calcis and cuboid bones, first upon the dorsal and then upon the plantar surface, so as to open up these joints. A key-hole saw was now introduced between the plantar soft parts and the shafts of the metatarsal bones, which were then cut through, one handle of a pair of bone-forceps being inserted between the metatarsus and the dorsal soft parts to protect the latter from injury by the teeth of the saw cutting from below upwards. After the operation the entire wound was plugged firmly with pledgets of lint closely crowded together. This dressing was retained for forty-eight hours, and subsequently the wound was filled from day to day with pads of lint, with a view of securing consolidation from all surfaces equally, and of preventing the bagging of matter.

The result in this and four other similar cases was entirely favorable,—the patient's walk having none of the stumping gait of an amputation.

OLLIER AND OTHERS ON RHINOPLASTY BY A NEW METHOD.—In the *Union Médicale* of April 25, 1874, is the account of a discussion at the Surgical Society of Paris on rhinoplasty, à propos of some cases by M. Ollier, in which he had attempted the restoration of the nose by a new proceeding. This proceeding was applied to cases in which the remains of the nose were, as M. Ollier expresses it, "sucked into the nasal fossæ." It consisted in dissecting a flap from the forehead, comprising both superficial parts and periosteum, and reversing it so as to present its cutaneous surface towards the nasal fossa, where it was expected afterwards to take on the characters of mucous membrane, while the bleeding surface was covered over by a flap dissected off the remains of the collapsed nose. The result was said by M. Ollier to be satisfactory, not only to himself, but to his patients, whom he regarded as still better judges of their own improvement; but some very lively discussion seems to have ensued on this point, some of the surgeons present being by no means pleased with M. Ollier's results, and not at all favorable to any operations of this kind. One of the debaters quoted the case of a patient who, from despair at the disgust produced by his mutila-

tion, had resolved to kill himself, but was weaned from his purpose by the results of the operation. This was met by another speaker, who said that he had another patient, who had thought also of killing himself, and was more than ever confirmed in his resolution when he saw the result of the operation on the other man. This need not be taken seriously; but it seemed agreed on all hands that the effects of such plastic operations are usually only temporary, and that in a year or two the newly-formed nose will most likely wither away. The operation by superimposed flaps seems to have been practised by other surgeons as well as by M. Ollier, and to be regarded as a very efficient proceeding.—*London Medical Record*.

PSEUDO-HYPERTROPHIC MUSCULAR PARALYSIS (*The Lancet*, June 6, 1874).—Drs. Clarke and Genners report the case of a boy who died, aged fourteen, from general muscular atrophy. The muscles of the calf had been from an early age, and until within two or three years of his death, considerably larger than natural. Difficulty in locomotion, due to muscular weakness, had been noticed from the time when he commenced to walk, at three years old, and had increased until he ceased to walk at eight, and to stand at ten. During the last three years of his life the calves lessened in size to below the normal, and the muscles of the thighs and arms became atrophied. At the time of his death, from pneumonia, he could not move the hip, knee, or shoulder-joints; he could move the ankle- and elbow-joints a little, and the fingers well. After death the muscles showed in various degrees the characteristic changes of Duchenne's disease. The gastrocnemii looked like lumps of fat, and under the microscope consisted of fat-cells, among which still ran some muscular fibres, accompanied by a good deal of connective tissue. Very few fibres except those greatly reduced in width, presented any granular or fatty degeneration. The brain and medulla oblongata and meninges of the cord were healthy; the spinal cord itself presented various changes throughout the cervical, dorsal, and lumbar regions. The most important was disintegration of the gray substance of the anterior, lower, and central portions of each lateral half. These changes were much greater than any previously found.

LACTATION LATE IN LIFE (*Atlanta Med. and Surg. Journal*, July, 1874).—Dr. T. S. Hopkins reports two cases of the return of the functions of the mammary glands after a cessation of seventeen and eighteen years. Both women suckled their grandchildren, one of them being over sixty years of age at the time.

POPLITEAL ANEURISM CURED BY FORCIBLE FLEXION (*The Lancet*, May 30, 1874).—Mr. Benfield reports the case of a man, æt. 38, of good general health, who was troubled with a small pulsating tumor in the left popliteal space. A distinct bruit was heard on applying the stethoscope, and firm pressure on the artery above the tumor arrested at once both the bruit and the pulsation. Treatment by flexion was resolved upon.

A flannel roller was applied to the leg, which was now flexed upon the thigh, and the latter upon the abdomen. The leg and thigh were firmly bandaged together so as to maintain forcible flexion, and heavy sand-bags were also employed to keep the patient from rolling out of position. This procedure occasioned very great pain, and a quarter of a grain of morphia was given subcutaneously for its relief. About six hours from commencement of flexion the patient could bear the pain no longer, and the bandage was removed and the leg gently straightened. No pulsation or bruit was now discernible. Patient complained of being chilly, and the foot of the affected limb was decidedly colder than its fellow. The limb was encased in cotton-wool,

a pad of lint placed in the popliteal space, and a flannel bandage applied. It was then placed straight on a pillow.

The aneurism was now practically cured, but for the sake of safety the pad and bandage, together with rest in bed, were maintained for ten days. The man was then allowed to get up and take exercise, which occasioned no pain or inconvenience. He was thus kept under observation for about three weeks, when he was discharged cured.

MUSCULAR SPASMS AFTER EXCISION OF THE KNEE-JOINT (*The Lancet*, May 30, 1874).—Mr. Gay reports a case in which excision of the knee-joint was performed as a consequence of long-standing strumous disease. The operation was followed by entire exemption from pain, with promise of immediate union and rapid recovery. Six days afterwards, however, spasmodic twitchings, which had previously been a distressing symptom, returned with greater severity than before the operation, and became so incessant, distressing, and uncontrollable, notwithstanding remedies of all kinds, that amputation was performed. This was followed by complete recovery. No cause for the spasms could be discovered. The nerves were all healthy, and there was no apparent impaction of the soft parts between the bones. Mr. Gay considers the case unique.

MORPHIA IN PUERPERAL AND URÆMIC CONVULSIONS.—Prof. Loomis recently published an article in the *N. Y. Medical Record* relating a number of cases of uræmic convulsions healed by hypodermic injection of morphia and the internal administration of infusion of digitalis, the results being favorable in the majority of cases. If opium is admissible in the treatment of uræmic convulsions due to organic disease of the kidneys, it is none the less so in the treatment of the convulsions of parturition, which are due to an active congestion of the same organs, caused by pressure of the gravid uterus. The nerve-centres are irritated by the same poison in both instances: therefore the same remedies should be applied.

Dr. G. O. Morrison-Fiset relates a case (*New York Medical Record*, July 1, 1874) of puerperal convulsions treated by hypodermic injections of Magendie's solution of morphia, with a successful result.

Dr. A. M. Dam reports (*The American Medical Journal*, July, 1874) five cases of uræmic convulsions following scarlatina, and one case occurring in a woman, æt. 30, in the seventh month of gestation. They were all treated with morphia administered internally, and all recovered.

THE USE OF LARGE ENEMATA (*The London Medical Record*, May 6, 1874).—The practical results of the recent discussion in the German medical papers on the use of large enemata seem to be as follows:

1. Enemata, if sufficiently copious, will reach the small intestine, the ileo-cæcal valve notwithstanding, provided there be sufficient propelling force, whether that be gained by a long column of fluid in the apparatus (as in the use of irrigators), or by the patient's position, with the pelvis elevated, favoring the descent of the fluid, or by repeated action of the injecting instrument.

2. Experiments have shown that it is neither necessary to use complex apparatus, nor to put the patient into awkward and perhaps dangerous positions; since from three to five feet of pipe, with a funnel at one end and a suitable nozzle at the other, is all the apparatus we need; and the patient simply lies upon the back, the only pressure required being that of the column of fluid.

The real pressure we have to overcome is that of the patient's muscles,—aided in some cases by tense gases

in the bowel; for if any one will insert a tube into the rectum before the injection has come away, he will see the fluid come out in jets or sprits when the patients strain, and less markedly so at every descent of the diaphragm.

3. The safety and efficiency, or the benign action, of large enemata of water, gruel, and the like, are very striking; but we are strongly inclined, however, to believe that a very small quantity of soap, or of some neutral salt, is even less irritating to the mucous membrane than pure water alone.

To sum up all, large injections do reach the whole length of the large intestine, and beyond it; they are safe and speedy remedies for fecal accumulations, for some forms of intestinal obstruction (notably intussusception) and internal herniæ; for the treatment of intestinal ulcers, of hemorrhage from the bowels, and diarrhœa; for worms, especially oxyurides, and their congeners; as a means of stimulating and increasing the secretion of bile, and of introducing into the small intestine nutritious matters in a state easily susceptible of absorption.

A VERY active preparation of ergot, which is particularly adapted for subcutaneous injection, is suggested by Dr. Wernich, of Berlin (*American Journal of Pharmacy*, July 1, 1874), who proposes to exhaust the ergot with ether, strong alcohol, and finally with water; the infusion is then dialyzed through parchment-paper, and the solution evaporated; this extract, after acidulation with sulphuric acid, was mostly soluble in alcohol, and when again carefully neutralized by soda, yielded to weak alcohol all its active properties. Subcutaneously injected, the author obtained good results promptly, and the inconveniences attending the hypodermic use were slight and disappeared rapidly.—*Apothekerzeitung*, 1874, No. 17.

CHLOROFORM IN STRYCHNINE-POISONING (*The New York Medical Record*, July 1, 1874).—A man took five grains of strychnine with suicidal intent. He was given twenty grains of sulphate of zinc, which produced vomiting. Convulsions had occurred repeatedly, however, and he was seized with one of tetanic form at the time of coming under observation. Every muscle was rigid, and tetanus was complete. Opisthotonos, irregularity of the pulse, varying from 120 to 140 in the minute, with all the accompanying symptoms, were noticeable.

He was immediately placed under the influence of chloroform. The convulsions ceased from the commencement of the anæsthesia, under which the patient was fully kept for three hours. The chloroform was then removed, but the patient did not awake until six hours afterwards,—a case of recovery.

CHLORAL IN CANCER (*New York Medical Record*).—At a recent meeting of the Société Thérapeutique, the efficacy of chloral in cancer was pointed out by Dr. C. Paul, who had used it in the shape of suppositories containing fifteen grains. Introduced into the vagina, they had produced sleep during the whole night, in cases where considerable doses of morphia had no anodyne effect, while the nature of the secretions, and especially their fetor, were favorably modified. Dr. Martineau mentioned a case of recurring cancer of the breast, which had almost reached the thoracic walls and the lung. Pledgets of lint, steeped in a solution of chloral, were introduced. Three days after, the surface had assumed a healthy hue and was granulating kindly, the fetor had vanished, and the hemorrhage stopped. Cancer of the uterus had likewise improved, so far as the pain and fetor were concerned, under similar treatment.

STRUCTURE OF NERVES.—As the result of an elaborate investigation into the structure of nerve-fibres, Dr. H. D. Schmidt comes to the following conclusions (*London Monthly Microscopical Journal*, May, 1874):

"In finally summing up the results of my researches regarding the structure of the *double-bordered* nerve-fibre, this will be found to consist of the following parts: 1, of the true nerve-fibre, the so-called *axis-cylinder*, consisting of a bundle of *granular fibrils*, enclosed within a distinct sheath of their own; 2, of a semi-liquid substance, the *medullary layer*, surrounding the axis-cylinder; 3, of the *fibrillous layer*, consisting of very fine, delicate, and smooth fibrils, and surrounding the medullary layer; and, 4, of the *tubular membrane*, or *external sheath*, a thin, structureless, and elastic membrane, enclosing all the other parts. Whether, now, the thirdly-named part really exists in the living nerve-fibre, or whether it is only produced by coagulation, it must be decided by other, more accurate histological researches than those hitherto made."

APHTHOUS STOMATITIS COMMUNICATED TO MAN THROUGH THE MILK OF A COW AFFECTED WITH THE SAME DISEASE (*New York Medical Journal*, July, 1874).—A man partook freely of milk at a period when an epidemic of aphthous stomatitis raged among the horned cattle of the country. The symptoms commenced in less than half an hour after the ingestion of the milk. They consisted of vertigo, tingling in the ears, feebleness, afterwards delirium and hallucinations. On the second day, vomiting and diarrhœa with abdominal pains set in, which promptly yielded to treatment by opium and subnitrate of bismuth. The fever, however, was not broken, and on the third day stomatitis appeared, with pytalism, and the development of aphthæ on the inner surface of the lips and cheeks, on the palate, and the inferior surface and borders of the tongue. At the same time, there appeared a phlyctenular eruption on the hands, feet, perineum, and scrotum. The nervous disturbances, delirium, and insomnia were combated by opium, given in doses of fifteen centigrammes per diem, and the stomatitis by gargles of chlorate of potassium. At the end of fifteen days the patient recovered.

OAT-MEAL FARINA AS A FOOD FOR INFANTS.—MM. Beaumetz and Hardy recommend very highly the use of oat-meal farina in the feeding of young children. According to these gentlemen, this farina resembles human milk most closely in its plastic and respiratory elements, and contains, in addition, iron and phosphate of lime. It has, besides, the property of preventing or arresting the diarrhœa which so frequently occurs in young children. Some infants of four to eleven months, who were fed upon this farina, were found to grow equally well with those who were nourished by the milk of a good nurse.

EXTRAORDINARY ACTION OF NITRITE OF AMYL (*New York Medical Journal*, July, 1874).—Dr. E. B. Janeway reports a case of cerebral anæmia with failure of the heart's action from pericarditis, where the patient was entirely unconscious, pupils dilated, conjunctiva insensible to touch, no pulse at wrist, breathing spasmodic. Inhalations of five drops of nitrite of amyl were commenced and cautiously increased. After the use of twenty drops the pupils contracted, the conjunctiva responded to the touch, and the pulse returned at the wrist. Consciousness returned, and he asked questions. The inhalations were suspended, and a half-ounce of brandy administered. In fifteen minutes another attack occurred, in which he died.

DETECTION OF ALCOHOL IN ORGANIC FLUIDS.—It is generally difficult to detect alcohol in organic fluids, on

account of the small quantity of liquid usually available, and the absence of a special reactive. M. Berthelot has discovered a very valuable reaction. When placed in presence of water, cold or tepid, benzoic chloride ($C_{14}H_5ClO_2$) decomposes very slowly. But if alcohol is added, benzoic ether is immediately formed, and precipitates the chloride in excess. The presence of the ether becomes manifest when a few drops of the liquid are treated with a solution of caustic potash; the chloride alone is dissolved, and the ether remains untouched. This reaction is very marked with a liquid containing 1 per cent. of alcohol, and permits the chemist to dispense with distillation.—*Tribune Médicale*.

LATENT PEPSIN (*The Druggist's Circular and Chemical Gazette*, July, 1874).—George W. C. Phillips objects to the theory that all wines and elixirs of pepsin, necessarily composed of alcohol, contain no pepsin at all, which theory was based on the fact that certain wines of pepsin when digested with coagulated albumen, at a temperature approximating that of the human stomach, have no solvent effect upon it. He has tested this matter experimentally, and draws the following conclusions: That while a carefully made wine of pepsin, not containing over ten per cent. of alcohol, may and does contain pepsin, it exists in a latent state, and that when diluted with the juices of the stomach, at the normal temperature of that organ, it regains its activity and will perform its digestive functions.

MISCELLANY.

THE following is part of a parody which appeared in *Punch* upon Mrs. Hemans's "Homes of England."

"The cottage homes of England,
How beautiful they stand"
(So once Felicia Hemans sang)
Throughout the lovely land!

'The cottage homes of England—
Alas, how strong they smell!
There's fever in the cesspool,
And sewage in the well.

The cottage homes of England!
Where each crammed sleeping-place
Foul air distils whose poison kills
Health, modesty, and grace.
Who stables horse, or houseeth kine,
As these poor peasants lie,
More thickly in the straw than swine
Are herded in a sty?

NOTES AND QUERIES.

GERMANTOWN, PA.

TO THE EDITOR OF THE PHILADELPHIA MEDICAL TIMES:

DEAR SIR,—You will please take my name off of your list of subscribers. I have been a subscriber for some time, but have determined to subscribe no longer to medical journals. I can get reports of all of the most recent scientific investigations in the daily papers, and other news too. You are not up to the *Times*. You should have enterprise enough to supply, on demand, any doctor and every doctor with a reporter when he has any scientific thing on hand.

In New York, the great scientific investigations in regard to rabies were done up in a first-class way by the reporters of the *Tribune*,—better, no doubt, than any miserable medical journal could have done them, and with

greater profit to the world and science, and the scientist too. Medical journals are too slow for the great scientists of this day.

You had no reporter at the late scientific investigations which were made at one of our medical colleges. Those of your city subscribers who were unfortunate enough not to have been invited, and all of your country subscribers, are to this day in absolute and disgraceful ignorance of all of the phenomena of sword-swallowing, playing on a flute without any flute, holding your wind under water, and, possibly, ballet-dancing. Basely ignorant of the caution given at that meeting, some of your subscribers may attempt to open an umbrella after it had been swallowed by a patient, and thus interfere seriously with its safe and expeditious withdrawal and the patient's swallow. When these scientific investigations are introduced into the curriculum of the college, when medical students are instructed to cultivate all of these scientific things, I hold it to be your duty to report the fact to your country subscribers, in order that they may know where to send their office-students to obtain true scientific knowledge and that which is up to the day.

To your utter confusion and downright shame, I learn that there were present no less than seventeen reporters of the daily press (two from New York),—all present for the express purpose of reporting to the world the names of the great scientists who took part, and, if I mistake not, the results obtained.

Again, you had no reporters at the late scientific pedestrian feat. As a result of this neglect, I venture to predict that your subscribers will never see the scientific report which the scientific investigators will no doubt prepare from the notes taken in the ring, at the rate of five miles per hour, heel and toe on the ground; also notes taken at night, around a table, with the aid of *pasteboards*. Notes taken in this way must have value—a certain value—to the medical public, and to the investigators themselves.

If you do not do the reporting business better, you will certainly lose many subscribers.

Yours,
SUBSCRIBER.

OFFICIAL LIST

OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U.S. ARMY, FROM JULY 14 TO JULY 20, 1874, INCLUSIVE.

WAR DEPARTMENT,
ADJUTANT-GENERAL'S OFFICE,
WASHINGTON, July 10, 1874. }

Special Orders No. 149.

(Extract.)

12.—The following boards of medical officers are appointed for the examination of assistant-surgeons for promotion, and of applicants for admission into the Medical Staff, U.S.A.:

At New York City,

Surgeon JOSEPH B. BROWN,
Surgeon JOHN MOORE,
Surgeon J. H. BILL,
Surgeon B. E. FRYER,
Assistant-Surgeon A. H. HOFF.

At San Francisco, California,

Surgeon CHARLES McCORMICK,
Surgeon C. C. KEENEY,
Surgeon GEORGE E. COOPER,
Assistant-Surgeon D. L. HUNTINGTON,
Assistant-Surgeon EDWIN BENTLEY.

The Boards will assemble August 4, 1874.

The junior member of each Board will act as recorder.

* * * * *

By order of the Secretary of War.

THOMAS M. VINCENT,
Assistant Adjutant-General.

SIMONS, JAMES, SURGEON.—Leave of absence extended two months, on Surgeon's Certificate of Disability. S. O. 155, A. G. O., July 17, 1874.

WEBSTER, WARREN, SURGEON.—Relieved from duty in Department of California, and to report in person to the Surgeon-General at Washington, D.C. S. O. 154, A. G. O., July 16, 1874.

BROOKE, JOHN, ASSISTANT-SURGEON.—When relieved by Assistant-Surgeon Fitzgerald, to report at these Headquarters for assignment. S. O. 86, Department of the Columbia, July 3, 1874.

FITZGERALD, J. V., ASSISTANT-SURGEON.—Assigned to duty at Sitka, Alaska Territory. S. O. 86, c. s., Department of the Columbia.

WOODRUFF, E., ASSISTANT-SURGEON.—Granted leave of absence for thirty days, with permission to apply for ninety days' extension. S. O. 153, A. G. O., July 15, 1874.

HARVEY, P. F., ASSISTANT-SURGEON.—Assigned to temporary duty at Fort Preble, Maine, as Post-Surgeon. S. O. 140, Military Division of the Atlantic, July 18, 1874.

SATURDAY, AUGUST 1, 1874.

ORIGINAL COMMUNICATIONS.

THE NERVOUS ACCIDENTS OF ALBUMINURIA.

BY S. WEIR MITCHELL, M.D.

ALTHOUGH physicians are prepared to find cases of albuminuria exploding suddenly into horrible convulsive seizures, I think that we less readily anticipate than we should do the frequency with which slighter forms of neural disorder are apt to owe existence to the same cause.

That these also should occur is of course not surprising. What in time may give rise to the horrible motor discharges of albuminuric epilepsy may well occasion slight and yet enduring phenomena long before the anæmia and blood-poisoning have become competent to produce the graver trouble. Yet, as I have said, in attempts to account for the lesser maladies of the nerve-centres I rarely find albuminuria alluded to as a cause, while in the cases which come to me from other physicians no causes are so much overlooked as those which arise from disordered renal function.

I have been myself surprised and interested of late, in running back over my note-books, to find how many such instances I have seen; in how many persons obscure trains of nervous phenomena have found their explanation in a condition of the kidneys in which there was a steady but limited loss of albumen. The cases in question admit of little classification as regards the forms of neural disorder, which have, in fact, proved to be most various. In the rarer examples they have followed distinct cases of congested kidneys, with large losses of albumen and well-marked dropsical symptoms, but most of them have been owing, as I have just remarked, to long-continued and slight, though steady, losses of albumen due to chronic forms of renal disease, which, having caused no other notable symptoms, remained for long periods quite unsuspected.

Many cases of nerve-lesion in albuminuria are due to the consequences of co-existent heart-disease or to extensive and gross lesions due to thrombosis or arterial-wall changes; but a more common, more interesting, and less noticed group is such as would possibly yield to the eye or the lens no more obvious central tissue-change than we have from mere functional acts.

I am disposed to consider albuminuria in its various forms as ranking, therefore, among the constitutional conditions which give rise to neural disease. Like syphilis, this peculiar manifestation of its lowering and disturbing tendencies is rare, and is, indeed, more uncommon than in the case of specific infection.

Without attempting to detail all of the many cases I have seen, I shall relate such of them as are most interesting, and especially such as, from their peculiarity, do not belong to well-known clinical groups.

Headache.—I have seen many examples of headache which were owing to diseased kidneys. The pain was usually a general ache, more or less constant, and accompanied by a sense of fulness and throbbing. It was often a frontal pain, but in one case it remained steadily in the occiput. Dr. Granger Stewart (on Bright's disease) speaks of headache as a common and early symptom in cases of contracting kidney, but elsewhere not much is said of it.

Here are three cases. The first is in many ways interesting, because it was a rare form of intermittent albuminuria dependent upon some mal-assimilation which permitted the albumen to enter the blood in such a shape as to filter away in the urine. This at least may explain the case in part.

H. G., a very able and intelligent man, æt. 27, gave me this history. After a typhoid fever, four years before he consulted me, he began to have severe acid dyspepsia, followed within two months by prolonged diarrhoea, in which he passed much of the oily matters of his food undigested. This state of things lasted a year, when a long stay at the sea-side seemed to have restored his health. Soon after, he began to have headaches, which, beginning at night, soon became constant. During three years he had almost steady pain. His general health was fair, the bowels regular, and digestion often exceedingly bad. He was easily tired, and could not write or read for more than an hour a day. There was no nausea, and no pain in the back. After carefully assuring myself of the absence of any notable organic troubles in brain and heart, an examination of the urine showed this curious condition. He passed almost three quarts a day. The specific gravity varied greatly, rising high, 1024 to 1030, after meals, and falling to 1010 to 1015 in the early morning. At this time there was not a trace of albumen, but after meals, from one to three hours, it was present only rarely to a large extent. I found hyaline or faintly granular casts. The case seemed so unlike any of the forms of Bright's disease as to both interest and puzzle me. That it was due to some disorder of the albuminoids of the blood seemed the most probable belief. A total change of diet—raw beef, milk, and the use of Bedford water—proved effective. The headaches left him by degrees, and the albumen, fading away to a mere trace, entirely left the urine during a long sea-voyage.

This patient died of acute pneumonia two years later, having had no return of the albuminuria or the headaches. It will have been noted that headache was the one positive symptom on account of which he claimed my care.

In 1870 I saw a gentleman from middle Pennsylvania, who had been for two years subject to unending headache. After the most careful scrutiny I could detect no positive disease of heart, lungs, stomach, or brain. There was simply frontal headache of much severity, always worse in the morning, and greatly aggravated by reading and writing. I suspected him of having slight insufficiency of the internal rectus muscle of the left eye, and he was found by Dr. Dyer to have this defect, and also slight myopic astigmatism. As I had seen many cases of headache owing to these defects, I trusted that their correction would relieve him, but, despite the relief which correction of the optical disorders gave, the headache remained unabated. On his return to the city I examined his urine, which I had previously neglected. It contained a small amount of

albumen, with a few granular casts. For this he took iron and other treatment largely, with some relief, but up to this time the headache continues, though in lessened severity, and the albumen remains in small amount, sometimes increasing.

In the only remaining case which I shall quote, the headache occurred in a boy aged 10 years, three weeks after scarlet fever.

The pain came on suddenly at night, was accompanied with flushed face and red eyes, and had lasted a week before I saw him. Then the albuminous state of urine was detected. The urine was smoky in color, of high specific gravity, and loaded with casts. The symptoms gave way under the use of hot baths, dry cups to the loins, and diuretics. There was no œdema anywhere, and no nausea at any time. Owing to the steady return of the headache in the afternoons, it was thought to be due to malaria, and was treated with quinia. I may add, so as not again to describe this case, that it was one of a number of cases of scarlatinal albuminuria out of which were developed epilepsies beginning with attacks of petit mal.

I have notes of two other cases in which headache without dropsy or nausea was the main symptom. One of them is since dead of Bright's disease. The other is yet living, and still suffers from pain in the head, having had little ease from varied forms of treatment.

Hemiplegia—multiple attacks.—I have notes of two cases of rather rare and curious character, in which albuminuric patients were subject to numerous attacks of slight hemiplegia, never very severe or very lasting. Both were men who had been full livers and too much addicted to alcohol. I give the notes of one of these cases.

Col. S., æt. 46, a sturdy, florid man, was eight years ago attacked with pain in the back, followed by pain in the legs, insomnia, and morning nausea. After a few days, his urine, which he had not noted, as he was living in the field, became bloody. A few days after, it cleared up as to color, but was not examined for albumen. He was at the time remote from medical advice, and when some months later an army surgeon attended him, no attention was paid to the kidneys. During this period and ever since he has been rarely free from headache, which varied in site and was often of terrible intensity. A year after the first symptoms were felt, he was a good deal in the sun, and began to feel quite suddenly a weakness of the right arm, with aching pain in the hand. It became well in a week or two, but proved to be the first of many like attacks, which sometimes fell on the right arm or leg, and sometimes on the left arm. Each attack was preceded by violent pain in the head. I saw him first in the fall of 1872. At this time the right arm and leg were feeble, and there was constant pain in the right hand, with frequent attacks of slight hemiplegia with numbness of the disordered part. The right leg had slight loss of feeling. In the right hand the compass-points could nowhere be discriminated as normal. The eye-grounds were certainly too full of blood, and in both eyes a hazy outline surrounded both the veins and arteries, but there was no swelling of the disks. The right face was somewhat less sensitive than the left, but there was no ptosis or squint. Taste and smell were both imperfect, and he had a steady subjective sensation of an odor like that of brown soap. The urine was loaded with albumen, and the casts, which were numerous, were granular, and rarely of the so-called waxy appearance. There was no œdema, and but rarely any

nausea. The hemiplegic attacks were at times severe, but nearly always a week sufficed to restore to him the power to walk, there being always some lack of power and of feeling. His habits as to stimulus varied, so that at times he drank freely, and then for months not at all or but little. I suppose that the urine, having become albuminous after his first attack of inflamed kidneys, had so continued, the inflamed organs undergoing chronic changes. It is difficult to determine what direct share his habits may have had in the pathogenesis of the frequent palsies, but I presume the albuminuric condition to have been the graver element of trouble. No treatment aided him, nor do I know how his case resulted.

Local Palsies.—The following case presented itself at my clinic, and was kindly reported for me by Dr. Gerhard, who detected the retinal disease with the ophthalmoscope, and was thus led to examine the urine, the case having been at first looked upon as an ordinary instance of facial palsy.

C. D. K., æt. 23, single, a plasterer, but occasionally (for three years past) a house-painter, was seen for the first time in December, 1873, when he presented himself for the relief of an attack of severe pain in the head, from which he had been suffering off and on for three years. He appeared well nourished, was not noticeably anæmic, and was free from any paralytic symptom or symptoms of disordered vision. He was ordered to take large doses of quinia, and in a few days returned to report himself cured. Several months later he again presented himself, with marked right facial palsy. This had come on suddenly, and had been preceded by pain in the region of the right ear. For two weeks previously he had been suffering from inflammation (gouty?) of the great toe, ankle, and knee of the right side, which for a few days was so violent as to disturb his rest at night, but at the time of the occurrence of the palsy the trouble in the joints had subsided. The patient had no control over any of the muscles (supplied by the seventh nerve) on the right side of the face, and the mouth was very much drawn to the left. There was no impairment of sensation, no deviation of the tongue or palate, and no loss of electromuscular contractility.

Examination of the eye-ground revealed signs of marked retinitis, and the urine was found to be acid, to have a specific gravity of 1012, and to contain albumen ($\frac{1}{2}$) and pale granular casts.

There was no dropsy in any part of the body, and the patient was not aware of having any renal trouble; it was found, however, upon questioning him, that he had been in the habit for several months previously of rising several times at night to void his urine. There was no blue line on the gums. Vision (he stated) was unimpaired.

In regard to his family history, he stated that his parents and all other members of his family (excepting a brother who died in childhood of "dropsy of the brain") were alive, and all but his father were in good health; the latter, however, was subject to rheumatism. The patient himself never had any serious illness, excepting scarlet fever at ten years of age, followed by dropsy lasting six weeks, until the commencement of the troubles for which he sought relief.

In this case it is quite possible that the renal disorder may have been of long existence, and the cause of the headache which seemed so enduring. Nor do I feel sure that the facial palsy was directly related as effect to the albuminuria; but certainly the renal troubles acting as enfeebling agencies may have been in some sense causative.

Here again is a brief case from my clinic (reporter, Dr. Alison), in which alcoholism and renal disease must conjointly be credited with the local palsy:

P. M., aged 45, married, a tailor, was seen for the first time at the clinic of the Orthopaedic Hospital, April 8, 1874. He states that he was a hard drinker until eight years ago, since which time he has been on only three or four sprints. Has had a touch of delirium tremens. He had a breaking-out on his head when he was a child; when a boy, had "three small spots" upon his penis; never has had rheumatism.

In November last, after a hard drinking-bout, he found a spot in the sole of his left foot in which sensation was disordered. There were also shooting pains in this foot. Since that time he has had increasing numbness of the legs, and in walking he has a sense of treading on a pad. During the last month he has also had attacks of severe pain through his head.

He stands perfectly well with his eyes shut. The legs are numb to the hips, and feel as though asleep. Sensation in the right foot is not so good as in the left; still, it is but slightly impaired. The shooting pains in his toes continue at irregular intervals. He sleeps badly, and has hallucinations. He states that he has taken both phosphorus and nitrate of silver without good effect. The eye-ground is healthy. The urine is pale, scanty; specific gravity 1012; contains a heavy cloud of albumen, and a few granular casts.

Ordered tinct. ferri chlor., gtt. xx, t. d.

April 17.—Tinct. ferri chlor. increased to gtt. xx every three hours.

The iron proved of little value; the albumen did not lessen under its use, nor was the loss of power diminished by any means used in the hospital up to early in May, 1874, when, under the use of full doses of gallic acid, he gained so rapidly in every way as to be enabled to return to his usual business, the albuminuria remaining, but in much diminished amount.

Within two years I have seen two remarkable cases of loss of power to write, dependent also on renal disease. Both were treated in vain by many and varied methods, and by able physicians, who, however, neglecting to examine the urine, missed the clue which, in one case at least, led to a happy issue. These seem to me very instructive examples of the mode in which disease may be developed. A certain limited set of ganglia are over-used; then we add a constitutional drain, and the too hardly taxed nerve-cells are the first to feel the trouble. The final weakening cause might be worry or it might be malaria, but is in these present instances albuminuria.

A clerk who wrote many hours of each day had, after some years of ill-paid labor, a slight attack of measles, as to which he gave but an indefinite account. It might even have been roseola, but was at all events followed by long-continued lumbar pain, with rare nausea, which passed away after a year, but left him feeble. Soon after, he had attacks of vertigo, and during the same summer a sudden development of writer's cramp. A rest of some months relieved him, and he partially recovered the power to use his pen. The next spring the writing-muscles suffered from a sort of choreal motion when in use, and then only, but accompanied with pain in the back of the hand. When he wrote for an hour the thumb and forefinger became agitated increasingly, and at last the pen fell from their grasp. Again rest and tonics and change of air relieved him, but he still had at times pain in the back, and more rarely nausea in the mornings. The following fall he

resumed his pen-work, and in a fortnight was seized with feebleness of the pen-fingers,—a feebleness which extended to the whole arm, and was constant. At this time I saw him first, and then discovered that he had a slight trouble of the mitral valve, and a urine which was steadily loaded with albumen and which contained many granular and fatty cells. His face was pallid, and a little swollen in the mornings, and his feet were oedematous at night. Absolute rest, with tincture of iron and warm baths, soon restored the power of the limb, but the albumen is much as before the treatment, and I have little hope of permanent relief.

The curious sequence of cramps, choreal movements, and paralysis, all affecting the same groups of ganglia, I have seen once before. It is certainly of much clinical interest. I have sometimes thought that if, as in our own public schools, writers were taught to write from, as it were, or with, the arm-muscles, merely using the fingers to *hold* the pen, they might thus escape the danger of having writer's palsy or cramp; but this patient always wrote with the arm-muscles, and yet, as I have stated, he fell a victim to the disorder in question.

The second case of like nature was in a lawyer, who was called upon at times for excessive, long-continued writing. He came to me owing to increasing loss of power, which began in the index-finger and thumb, and was felt so severely as to prevent his writing for more than an hour at a time, when his hand gave out and the pen dropped. His other symptoms gave no reason to suspect renal trouble, and I only examined his urine because to do so has become a part of the routine of every examination of a new case. To my surprise, I found a moderate amount of albumen, a specific gravity of 1014 to 1020, and rare hyaline or faintly granular casts. Rest, change of air, and various iron tonics speedily reduced the albumen to a trace, at which it yet remains. As this trouble lessened, the arm improved, and for a long while past there has been perfect power to write for several hours on a stretch. His general health has also improved greatly.

I could readily add to these other examples, more or less striking, of local paresis or distinct palsies observed in connection with albuminuria. I find among my notes some curious instances of what, having been regarded as hysterical disorders, proved to be traceable to renal disease.

In one remarkable instance, a married lady, æt. 29, had prolonged fainting-fits. They began during her unmarried life, and were alike notable for being most profound, as well as for their frequency and suddenness. She passed through a first pregnancy with no graver symptoms, but the attacks, continuing, began to be associated with occasional nausea, so that when the nausea was the worst the fainting-spells were most common and most intense. Then also the general vigor and power of endurance, never great, began to fail quite notably. At this time I saw her first, and it was then found that she had a steady loss of albumen, but not in large amount.

I cannot flatter myself that the after-treatment much lessened this flow, but it exerted so favorable an influence on her general health that, despite the still constant loss, she rose above the possibility of attacks, and by steady care of her health has remained in a very satisfactory condition.

The following case is on many accounts interesting, and especially so because absolute loss of taste from disease is extremely rare:

Mr. McM., æt. 30, hotel-clerk, and thus occupied for ten years; two years ago hurt his side by a fall, and had slight pulmonary hemorrhage. In May and June he had a succession of colds, and at last a violent spell of renal congestion, with bloody and scanty urine, horrible headache, and high fever. There is little need to linger on the treatment. The attack was nearly fatal, and after much active treatment the first relief was from a prolonged pack. The albumen increased with the larger flow of urine, and at the second month was in large amount; specific gravity 1014 to 1019; granular casts abundant; pain in back and legs, and slight œdema of ankles and face. The attack took place in March. In May he lost his sense of taste entirely, and also in part that of smell. So absolute was this loss that he could not tell quinia from sugar, or vinegar from milk, if we were careful to prevent him from using any of the small remnant of olfactory power. Until he went away from this city in the fall this curious condition remained unaltered. Mr. McM. recovered his health entirely after a prolonged stay in the mountains, and is now, many years having passed, in full personal vigor.

I have twice seen cases which were supposed to be pure examples of overwork,—both lads at college,—in whom I found albuminuria. One of these was a fine young fellow, who, near to the close of his college career, began to find his power to study lessening, while at the same time he was less able to get to sleep, and quite unable to stay asleep very long. Rest did no good, and at last I was asked to meet his physician. The lad proved to have a moderate amount of albumen in a urine of quite high specific gravity and containing many hyaline casts. To my great satisfaction, he perfectly recovered. The other boy was less fortunate.

Acute Mania.—Neither is it very rare, I suspect, for sudden and complete cases of renal congestion to result in attacks of acute mania; at least I have seen such examples.

More rare must be instances like the following:

Several years ago I was asked to visit Mr. M., æt. 40, a well-known insurance agent, who was staying with his wife and family at a hotel in this city. Mrs. M. and two of his friends assured me that his habits as to stimulus were unusually good.

His wife stated that a week before my visit he had begun to be weak and feverish, and to have at night copious sweats, and quite suddenly complete insomnia.

When I saw him, he was flushed, and his pulse 130; breathing 35; no lung- or heart-disease. He had passed one week without sleep. His manner was quick and wild, his hands in constant tremor, and he was haunted by delusions as to animals,—chiefly as to dogs. I do not think any one would have hesitated a moment to diagnose the case as the delirium of alcohol. Indeed, it was some time before I could credit the indisputable evidence which prevented me from holding this belief. He used stimulants rarely, tobacco in great moderation, and he had been subjected to no mental shock. A more careful study of the case showed him to have a large amount of albumen in his urine, with numerous casts and a little blood. He slowly recovered his mental health and the power to sleep, and left the city some months later much improved, but still passing albumen in large amount.

I think it needless to multiply cases further, believing that I have shown how varied may be the neural phenomena arising out of the various disorders known to us collectively as albuminuria.

CASES CURED BY ELECTRICITY.

BY HUGO ENGEL, M.D.

NIEMEYER has been, I think, the first author in this enlightened age of improved diagnosis who said that we should now try to improve our therapeutics by empiricism based upon sound knowledge, *i.e.*, with the aid of our advanced diagnostic art to note carefully the effect of our therapeutical agents, so that certain conditions under which remedies act can be specialized, and their efficacy established by trial.

Such a way of recording trustworthy facts was, a short time ago, less reliable, as our diagnosis was so uncertain; and, although we are even now far from being perfect in it, we can better rely at present upon records of cases.* In consequence of this, the effect of our therapeutical agents can be better observed. In my opinion, it is the duty of every physician to spread before the fraternity any facts which might tend to improve our knowledge of healing, and not to think that “*natura sanat et medicus curat*” implies that nature will always do the first, even when the physician fails to do the second.

I have studied for a considerable time the effect of treatment by electricity in certain cases which came under my observation, and publish to-day some of them in the *Philadelphia Medical Times*, that the treatment may be tried by the profession, and its effect, observed on other cases, recorded.

Pollutions.—A case of frequent involuntary discharge of semen, that had baffled all routine treatment and all dietetic and psychical directions, induced me to try electricity. After repeated failures of other kinds, the following galvanic treatment was successful. I placed one electrode, armed with the positive pole of a constant current (16 cells), in the middle of the neck on the spinal column (having before thoroughly wetted the skin and the leather covering the electrodes), and the negative on the os sacrum, and kept the electrodes in this position for three minutes, thus producing a constant current. Then, with the same precaution, the positive pole was placed on the perineum, and the negative on the dorsum of the penis near the symphysis. The negative was kept there for about a minute, and then slowly moved up towards the glans, and kept there for the same time, while the positive was not changed in its position. The treatment is, as the reader will observe, similar to the one recommended by Meyer. In five cases treated thus, an amelioration was observed the first night, and after from nine to twenty-two applications the cure was established. To enable the reader to form a correct idea of the cases, I publish two of them.

Case I.—Charles S., æt. 24 years, strong, but pale-looking, had practised onanism from his fourteenth to his twentieth year, “not oftener than once a day.” For the last four years he has not been guilty of the practice, but has had frequent discharges of semen, which have

* In this respect we decidedly owe most gratitude to Prof. Da Costa, whose work has more than any other promulgated the advanced knowledge of medical diagnosis.

come during the last year once, and sometimes twice, every night.

Case well after twelve applications of the constant current, applied at first every day, then every second day, then every third day, and so on. Has now (over a year) no pollutions if he has connection with a woman every two weeks, which he was unable before to do. If he omits the coitus, has a pollution about every three weeks.

Case II.—Fred. M., æt. 28 years, healthy-looking, with a history similar to that of Case I. Complained of repeated pollutions (one at least every second night), "which weakened him very much," and when he had tried to enjoy a coitus "the discharge would come right away" as soon as the penis had entered the vagina, "and the penis would then double itself." Cured after sixteen applications.

Fred. M. is now married, and has a child.

The other cases were similar. In no case was there any discharge during daytime, except in one, where the patient had slept in the afternoon, and in all cases there were dreams and a voluptuous feeling connected with the pollutions. All these cases, therefore, were in the primary stage. Cases of longer standing I have not seen since I have been employing electricity. In two of the cases there were small external hemorrhoids.

The most careful examination could not reveal any other cause of the complaint than masturbation, except, perhaps, the irritation from contiguity; but here the treatment was successful, and the hemorrhoids still remained.

Nocturnal Incontinence of Urine.—Owing to the surprising results I had in some cases of nocturnal incontinence of urine of children, I have been overrun with children who have been sent to me for the treatment of this complaint. Of the different ways of using electricity in these cases, I have found the following to be invariably successful. A constant current of six cells (stable) is sent through the vertebral column for three minutes, then the positive pole of a faradaic current (medium strength) is placed over the symphysis, after having thoroughly wetted the skin and the electrode, and the negative pole introduced into the urethra as far as the entrance into the bladder,—no farther. The electrodes are kept in their position for five to eight minutes.

The following case will show the effect, and as I have treated now twenty-three cases successfully (all children between 4 and 10 years), I think I can speak from experience:

Anna V., æt. 8 years, delicate health. Her mother says that the girl always suffered from nocturnal incontinence of urine, and in cold weather much more (very naturally). She had whipped the child for doing so (foolish and barbarous), and had tried "a lot of medicine and doctors," but of no avail.

October 20, 1873.—Had passed her urine last night involuntarily, as she always did during night. Treatment by electricity (as above, six minutes) commenced.

October 21.—Patient passed no urine last night; wonders that she "need not pass water so often any more," and it seems to her as if it flows much stronger, with more force. Current again applied for five minutes.

October 22.—No nocturnal incontinence last night. The little girl looked much brighter, as might be imagined, from the feeling that she was going to lose "that nasty habit." Treatment omitted.

October 23.—The same. Current applied for three minutes.

October 25.—The same. Patient felt a desire to urinate at 1 o'clock A.M.; she got out of bed and urinated. Current applied for five minutes.

October 28.—There had been no farther symptoms of incontinence. Current applied for three minutes.

November 2.—The same. Current applied for two minutes.

November 20.—The same. Current applied for a few minutes, and patient discharged.

April 12, 1874.—I saw the patient's mother to-day, who informed me that her daughter was "totally well, and gaining in health every day."

This is one case: certainly not all are so favorable. Sometimes this treatment has to be continued for two weeks every day. As a rule, where there has been no symptom of incontinence for three consecutive nights, I omit the application of the galvanic current for one day, then for two days, and so on. Here the personal judgment must decide.

These cases do not need any further comment. The diseases are described in all their different forms in so many medical books that it would be only a repetition to say more about them here. How successful the treatment will be in more complicated cases, further experiments will have to show.

NOTES OF HOSPITAL PRACTICE.

UNIVERSITY OF PENNSYLVANIA.

SERVICE OF DR. H. C. WOOD.

Reported by Dr. LOUIS STARR, Chief Assistant.

LOCAL PALSY IN LEAD-POISONING.

CHARLES M., aged 42, a painter by occupation, applied for treatment at the dispensary on January 8, 1874. He is married, has four healthy children, is perfectly temperate, and has always enjoyed good health until about two months ago, when, while working against time, his right arm became very much fatigued, he had temporary wrist-drop, and was obliged for a day or two to work entirely with the left arm, which he is able to use almost as well as the right. Early in December, 1873, after a period of unusually hard labor, he began to notice numbness and a tingling sensation in the index-finger of the right hand; this gradually extended up along the inside of the arm to the elbow, and then involved the whole hand. The tingling, which was slight at first, slowly became more severe, and the arm grew so feeble that one week before coming to the dispensary he was obliged to give up work. He stated that he had been careful as to the cleanliness of his hands, although in using putty (often colored with white lead) he was in the habit of forcing it into the nail-holes with the thumb, and then smoothing it off with the index-finger instead of employing the ordinary putty-knife: the friction this occasioned frequently wore the skin off the end of the finger, leaving a raw and sometimes a bleeding surface. For several years past he has, while actively engaged at his trade, voided large quantities of urine, the amount passed often ranging as high as three pints during a single night. It had at such times the peculiar violet odor due to the absorption of turpentine, but was always normal in appearance, and he has never had anasarca or pain in the region of the kidneys.

When he came under observation there was a distinct blue line along the margin of the gums, the tongue was

coated, the bowels constipated, and there were some dyspeptic symptoms, though no tendency to colic.

The urine presented the following characters: quantity and odor normal, reaction acid, color light yellow, large deposit of uric acid crystal on standing for a few hours; no albumen or tube-casts could be detected.

The right arm was found on measurement to be slightly larger than the left, the muscles being firm and exceedingly well developed; there was no wrist-drop, but considerable loss of power in both the flexors and extensors of the fore-arm, and some want of co-ordination in the muscles of the hand; the latter was most markedly exhibited when he endeavored to pick up a small object between the thumb and index-finger. The numbness and tingling were most marked in the index-finger, and from this position extended over the whole hand, and up the arm as far as the shoulder. The skin covering the palmar surface of the first joint of the index-finger was very thick, and almost devoid of sensibility. No alteration of the surface-temperature of the arm was appreciable to the hand; all the muscles responded well to the faradic current, and the electro-sensibility of the skin remained normal.

He was directed to bathe the arm night and morning in a strong solution of salt and water, to return three times a week for electrical treatment, and to take internally gr. v of potass. iodid. in f3ii of infusion of gent. comp. three times daily, with moderate doses of magnesiz sulph. before breakfast in the morning until the constipation was relieved.

On January 13 the iodide of potassium was increased to gr. v four times daily, and lin. saponis camph. ordered instead of the salt-baths; under this treatment the condition of the arm improved steadily, the blue line began to fade from the gums, and the bowels became regular.

On the 20th all internal medication was discontinued, and the sole reliance placed upon faradization of the affected muscles and the application of the brush to the skin of the arm and hand. By February 6 the numbness and tingling had disappeared, the muscular co-ordination had returned, and the patient complained merely of weakness in the arm; strength was restored rapidly, and on February 26 he asked to be discharged, as he felt himself well enough to resume work.

TRANSLATIONS.

THE ACTION OF OXYGEN UPON REFLEX EXCITABILITY.—Dr. Ananoff gives (*Centralblatt für Med.*) results arrived at by him from experiments which he performed with the view of investigating this subject. Two rabbits of like size were chosen, and to them poisonous doses of strychnia were administered. One of them was then exposed to pure oxygen, while the other remained in the atmosphere. At the expiration of twenty-eight minutes the rabbit which was inhaling pure oxygen had not had any of the convulsions which precede death from this poison. The supply of oxygen was then stopped, but death did not occur until ten minutes later, and was then attended by convulsions which were not violent in character. The animal which had been permitted to remain in the air gave evidence of convulsions three minutes after the poison had been swallowed, and in seven minutes was dead. To prove that this difference was really due to the influence of the oxygen and not to the pressure upon the gasometer whence the gas was supplied, a similar experiment was performed, except that, for the oxygen previously used, atmospheric air under pressure was supplied to one animal, while the second, as before, breathed the outside air. After seven minutes the first animal manifested convul-

sions when irritated, and at the end of twenty minutes was dead; the second died in six minutes. In a third experiment, one animal breathed air, and the other oxygen, but both gases were under pressure. The first lived but twenty minutes, while the second lived thirty-two. From these results it must be concluded that no certain and positive effect must be expected except from the supply of pure oxygen. W. A.

ALTERATIONS OF THE SPINAL CORD AFTER INJURIES TO NERVES (*Centralblatt für Med.*).—In addition to those alterations in the nerve-substance of the cord following resection of the sciatic nerve which have been already noted, Hagem found that in those animals which survived the experiment more than two months there occurred a progressive muscular atrophy which began in the muscles of the posterior extremity of the uninjured side and extended to those of the anterior extremity of the same side. This was due to perimenigitis caused by hemorrhage and a general central myelitis. This latter affection was characterized by hyperæmia of the gray matter, into which there were numerous extravasations of blood. There was likewise an exudation into the central canal, and a characteristic degeneration of the ganglion-cells which proceeded to entire destruction. Similar changes were found in some cases when the lesion had been but a simple section of the sciatic nerve. W. A.

GROWTH OF BACTERIA UNDER LISTER'S DRESSING.—H. R. Ranke (*Centralblatt für Chirurgie*), in seeking to answer the question as to the presence of Bacteria in wounds treated by the antiseptic method, made during the month of May many observations on cases under treatment in the clinic at Halle. Many of these cases were amputations in which there was neither fever nor suppuration, so that it cannot be objected to his results that the cases were those in which the dressing had not been successfully applied. In all the cases but one which were subjected to examination some forms of Bacteria were found. The figures presented by them were various, those of middle and small size being in less number than the larger. It was remarked that the micrococcus was found at the first renewal of the dressing, twelve hours after the operation. W. A.

CONDURANGO.—Dr. Alfred Obalinski, of Cracow, reports (*Centralblatt für Chirurgie*) successful results in two cases of epithelial cancer treated by condurango, both internally and locally. The first patient, a woman aged 80, had a small epithelial cancer (ulcus rodens) on the under eyelid; the second, also a woman, aged 50, had an ulceration of a similar character of the size of a bean, which had been noticeable for three years and had been already treated by caustics. Six weeks later both patients were seen again, and in both cases the ulcerations were completely cicatrized. W. A.

THERAPEUTIC NOTES.

IODOFORM AS A TOPICAL APPLICATION, PARTICULARLY IN VENEREAL DISEASES.—MM. Dubrisay and Pelletan, in independent brochures upon this subject, arrive at the following conclusions in common (*Jour. de Dermatol. et Syph.*).

1. Iodoform is a local anæsthetic.
2. Applied in the form of a powder it cicatrizes wounds rapidly.
3. It is especially indicated in small superficial atonic wounds, or those having a tendency to phagedæna, soft chancres, suppurating buboes, syphilitic onychia, syphilides generally, varicose, scrofulous, and cancerous ulcers.

4. It operates more surely and promptly than other therapeutic agents ordinarily employed in the cicatrization of ulcerating syphilides, under whatever form they may present themselves.

5. In the treatment of soft chancre it is in some sort a specific in the promptitude with which it causes cicatrization without pain.

6. In the treatment of simple or virulent buboes (non-specific) it may be employed in the form of ointment as a resolvent during the first period with more success than a blister or tincture of iodine. During the period which succeeds the opening of the sore it hastens rapid cicatrization of the wound.

7. In the case of soft chancre, of ulcerating syphilides, and of bubo, when the suppuration is abundant it is preferable to commence the treatment by solution of iodoform in glycerin and alcohol. The iodoform in powder may be used later.

8. The employment of iodoform in syphilitic affections does not do away with the necessity of using internal treatment.

9. The rapid cicatrization brought about by iodoform is due—1, to the simplicity of the dressing, which does not irritate the diseased parts; 2, to absorption of secretions by the powder; 3, to its antiseptic properties, particularly when it is dissolved in glycerin and alcohol; 4, to the presence of iodine, which acts favorably on syphilitic ulcerations of all kinds.

Solution of Iodoform.

R Iodoform, \mathfrak{z} i to \mathfrak{z} iss;
Glycerin, $\mathfrak{f}\mathfrak{z}$ xij;
Alcohol, $\mathfrak{f}\mathfrak{z}$ iv.

M.—Ft. sol.

Iodoform Ointment.

R Iodoform, grs. xxx;
Alcohol, q. s.;
Axungia, \mathfrak{z} i.

M.—Ft. unguent.

HYPODERMIC INJECTIONS OF MORPHIA IN STRANGULATED HERNIA.—Dr. A. Szatvory reports (*Jour. de Thérapeut.*) three cases of strangulated hernia, where, taxis having failed, an injection under the skin of a few drops of a solution of morphia containing about $1\frac{1}{2}$ grs. to the drachm of water produced such relaxation around the strangulated parts of the intestine that another attempt at taxis resulted in reduction of the hernia.

POST-PARTUM HEMORRHAGE (*The Canada Lancet*, April, 1874).—Dr. Augustus Jukes recommends in cases of post-partum hemorrhage the injection into the cavity of the uterus of dilute alcohol. He has thoroughly tested its efficacy in such cases, and has never known it to fail, or, on the other hand, to produce any bad results.

The following are the only requisites for its success: *First*, that it be not too long delayed.

Secondly, that the uterus and vagina be first carefully emptied of all retained matter, whether clots or placenta.

Thirdly, that the tube be passed fairly within the cavity of the womb, so as to insure a full stream reaching its interior. Where this is effectually accomplished, the action of the muscular walls of the uterus is often so rapid and energetic that the fluid is at once and violently ejected.

NITRITE OF AMYL AS AN ANTIDOTE TO CHLOROFORM (*The Richmond and Louisville Medical Journal*, June, 1874).—Dr. William C. Dabney has made some experiments with a view to determining whether or not nitrite of amyl, by its effect as a cardiac stimulant, would be of service in cases of chloroform narcosis. In three out of four animals the amyl produced a decided increase in the frequency and force of the heart's beats,

and they recovered when death was apparently imminent. In the fourth no effect on the heart's action was noticed, and the animal died.

STRYCHNIA AS AN ANTI-EMETIC (*The Canada Lancet*, April, 1874).—Dr. Thomas E. Dupuis reports a case of obstinate vomiting in a delicate female, which was absolutely uncontrollable, and continued until the most extreme prostration had occurred. After nearly all other remedies had been tried unsuccessfully, the following solution was given in drachm doses every two hours: R *Liquoris strychniæ*, \mathfrak{M} xx; *aquæ*, \mathfrak{z} iv. The effect was very sudden and decided: the vomiting stopped entirely within a few hours, and the patient soon recovered.

GELSEMINUM IN FACIAL NEURALGIA (*The British Medical Journal*, May 2, 1874).—Drs. Sawyer and Mackey highly recommend the employment of gelseminum for the purpose of relieving pain, especially in branches of the fifth nerve. The preparation used is a tincture made from two ounces of the coarsely-powdered root macerated in a pint of rectified spirit; dose, five to twenty drops. The evidences of the physiological action of the drug are loss of sight, double vision, headache, and paralysis.

ELEGANT FERRUGINOUS PREPARATION (Prof. Goodell).—The following offers simply the most elegant and efficient ferruginous preparation we know of:

Take of tincture of the chloride of iron three fluidrachms, dilute phosphoric acid half a fluidounce, syrup of lemons three fluidounces; mix. A whitish preparation, pleasant to the taste; to be exhibited in a dose of a dessert- to a tablespoonful.

VOMITING CONTROLLED BY TOBACCO-SMOKE.—A young girl not pregnant, suffering from severe and uncontrollable vomiting, under Dr. Beaumetz's care at the Hôtel-Dieu, was, after the ineffectual trial of various remedies, ordered to smoke a cigarette after each meal. This, so long as its use was persisted in, seemed to check the vomiting entirely.

ANTI-CANCEROUS SOLUTION (Giordano).—

R *Acid. citric.*, \mathfrak{z} i;
Aquæ destillat., \mathfrak{z} i \mathfrak{z} ii.

M.—Pieces of charpie soaked in this solution and laid upon cancerous ulcerations act as a detergent and delay the progress of the disease.

Dr. EBSTEIN recommends the use of atropia in salivation. In his hands one-fiftieth grain daily, increased in the course of eight days to one-twelfth grain internally, had a decided effect in lessening salivation in a case of hemiplegia. Hypodermic injections of the same drug in the region of the neck had a still more favorable effect.

TOOTHACHE.—Dr. Q. C. Smith praises the following most highly (*London Med. Record*): Take of carbolic acid, saturated solution, chloral hydrate, saturated solution, paregoric, fluid extract of aconite, of each an ounce; of oil of peppermint half an ounce; saturate the pledget of cotton or a piece of sponge, and tightly pack in the cavity.

An artificial ferruginous mineral water may be made by the following formula:

R *Ferri citrat.*, gr. xvi;
Syr. limonis, $\mathfrak{f}\mathfrak{z}$ xxvi;
Artificial Seltzer water, ad Oi.

This makes an agreeable mixture, and can be modified by the use of ordinary soda-water procurable from any apothecary. It is not necessary that the mixture should contain much air, and if kept in a cool place the bottle containing it may be opened several times without depriving it of flavor.

PHILADELPHIA MEDICAL TIMES.

A WEEKLY JOURNAL OF

MEDICAL AND SURGICAL SCIENCE.

The Philadelphia Medical Times is an independent journal, devoted to no ends or interests whatever but those common to all who cultivate the science of medicine. Its columns are open to all those who wish to express their views on any subject coming within its legitimate sphere.

We invite contributions, reports of cases, notes and queries, medical news, and whatever may tend to increase the value of our pages.

All communications must bear the name of the sender (whether the name is to be published or not), and should be addressed to Editor Philadelphia Medical Times, care of the Publishers.

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SATURDAY, AUGUST 1, 1874.

EDITORIAL.

INTRAVENOUS INJECTIONS OF CHLORAL IN HYDROPHOBIA.

AS most of our readers are no doubt aware, the intravenous injection of chloral has not only been proposed by French physicians, but carried out in several cases of tetanus, and even as a means of producing anæsthesia for surgical purposes. At the séance of the Société Médicale des Hôpitaux, June 26, M. Bucquoy reported a case of hydrophobia in which he had exhibited the drug in this method. The patient was a man who entered the hospital May 31, having been bitten four weeks previously by a dog. On May 29 he first began to suffer from malaise and total loss of appetite. At the time he came under M. Hanot's care he complained bitterly of pain in the arm and the finger which had been bitten, and of sleeplessness. His skin was hot, pulse 120, and any attempt at drinking, or even the sight of water in a glass, produced violent hydrophobic spasm of the pharynx and thorax.

It having been determined to practise the intravenous injection of chloral, the arm was tied up as for bleeding, and the fine point or needle of a syringe thrust directly into the vein. The syringe contained 1 gramme of chloral dissolved in 10 grammes of water, and ten syringefuls were given in an hour and a half. At the end of this time symptoms of "chloroformic excitation" had replaced those of the disease. Nevertheless the injections were repeated until, in about two hours, 13 grammes of chloral had been injected. The patient fell asleep,

and slept tranquilly until the evening, when he awoke in a condition of drunkenness, and was able to drink without spasm. He voided some bloody urine, but passed a quiet night, sleeping at intervals. The next morning the symptoms recurred, and about 1 P.M. the injections were repeated, 20 grammes of the drug being thrown into the left saphenous vein. This produced a deep sleep, which lasted two hours, when the patient was seized with a violent tetanic spasm, in which he died. The chloral did not affect the temperature very sensibly. At the autopsy the veins made use of were free from clots.

In the course of the discussion which followed this report, M. Bucquoy stated that the canula had been allowed to remain during the whole of each operation, and M. Féréol promised to report to the Society a case in which hydrophobia was developed two years after the reception of the bite.

WHAT NEXT?

IN a recent editorial we animadverted upon the methods of acquiring popular fame and practice which are becoming fashionable in New York. It may be that all our old notions of propriety are wrong, and that as the people are in reality to a great extent the arbiters in medical matters, so far at least as concerns *pecuniary* success, therefore it is better to spread before them all our knowledge and all our differences, so that a man may make up his judgment from the *Tribune* or other of his daily papers who is the best physician or surgeon of his neighborhood. Out of the attrition of the daily life of great cities usually come the sparks that light up revolutions; and where should a revolution start in this country if not in New York? Is the profession there ready for revolution?—ready to cast off the old garments of respectability and to put on the new livery, whose color and fit are so close to that of the servants of quackery? We should judge not; yet time and again long articles appear in the *Tribune*, undoubtedly written by medical men, and undoubtedly written for the purpose of aiding those whose praises they sing. This is done, too, seemingly without a protest from any one; not a word against it in the New York medical press, not a whisper in the societies,—at least that reaches the outside world.

The consultation-room has been held the most sacred of all places; but in New York, when a man differs from his fellows, he, at least sometimes, goes for solace to the *Tribune*, and details in long, well-written articles the discussions of the consultation-room, the superiority of his own merits, and the

grand improvements he has made in medical science ; or, if he does not actually do this, he tells his subordinate all about the circumstances, and he does it for him.

The recent vagaries in regard to rabies are still fresh in the minds of men ; but we have been incited to writing the present article by reading nearly two columns in the *Tribune* of July 14, detailing how Dr. William F. Fluhrer thought an arm could be saved when Dr. James R. Wood and others thought it could not, and how Dr. Fluhrer did save the arm, etc., etc.

There are few things more pitiable than a man struggling vainly in a flood. We do not covet a martyr's destiny, and if the profession decide that the necessities of to-day require the appropriation of the quack's method by the regular profession, we have nothing to say ; but when the spirit and letter of the Code of Ethics are opposed to such doings, it is but fair that all members of the profession in good standing should be forced to comply with this code.

AS most of our readers probably know, Miss Jex-Blake, the lady who has won such world-wide notoriety as the champion of her sex in connection with the University of Edinburgh, was "plucked" in her recent examination. The indignant young lady rushed into print for solace, charging her examiners, in a letter to the editor of the *London Times*, with unfairness, and asserting with characteristic but unfeminine modesty that she was "thoroughly prepared." Owing to the circumstances of the case, the examiners decided it necessary to reply to this letter, and, in a subsequent issue of the same paper, published a document which should, if the thing be conceivable, abash Miss Jex-Blake. The subjects of examination were chemistry, botany, and natural history. Her papers "were carefully examined by six examiners (three of whom were professors), and they unanimously agreed that the answers were extremely defective on every subject."

DR. HOOKER, of Kew Gardens, than whom there is no higher authority upon such matters, has officially informed the English colonial office that the sanitary virtues of the *Eucalyptus globulus* have been greatly exaggerated.

IN the recent exhibition at the Royal Academy, London, a number of etchings and oil-paintings, some of them said to be of great merit, the work of English surgeons and physicians, were on exhibition.

CORRESPONDENCE.

TO THE EDITOR OF THE PHILADELPHIA MEDICAL TIMES:

DEAR SIR,—Dr. Berkart, in the *London Lancet* of March 28, informs the readers of that journal that he first conceived the idea of injecting pulmonary vomicae as far back as 1872.

I think it is due Dr. William Pepper, of this city, to state that he informed me and others in the *spring* of 1867 that he believed it possible to treat phthisical cavities with a fair prospect of success by injecting medicines into them through the thoracic walls, and at the same time said that he would make the attempt as soon as the proper opportunities should present themselves.

I make this statement because there seems to be some doubt as to who is entitled to the credit of first suggesting this plan of treatment.

Very respectfully,

R. G. CURTIN.

PHILADELPHIA, July 15, 1874.

PROCEEDINGS OF SOCIETIES.

PATHOLOGICAL SOCIETY OF PHILADELPHIA.

THURSDAY EVENING, MAY 28, 1874.

THE PRESIDENT, DR. WM. PEPPER, in the chair.

DR. HUTCHINSON presented, by permission, without a written history, as he reserved the case for publication elsewhere, several specimens of *lymphadenoma*, removed from the body of a young man who had died a few weeks before in his wards at the Pennsylvania Hospital. More than a hundred lymphoid tumors could be counted distributed beneath the skin of various parts of the body, the largest being situated over the sternum. There was complete paraplegia, which Dr. Hutchinson believed, during the life of the patient, to be due to compression of the spinal cord by a tumor similar to the tumors on the surface, and the autopsy showed that his diagnosis was correct, a growth being found within the spinal column on a level with the seventh and eighth vertebrae, almost completely surrounding the cord. A microscopic examination of the blood during life showed a great increase of the white corpuscles.

Dr. JAMES TYSON said an allusion of Dr. Hutchinson's suggested an explanation of the origin of these tumors in different parts of the body, where there are apparently no elements of a lymphoid nature. Dr. H. had mentioned glandular enlargements on the conjunctiva. These doubtless had their origin in the so-called *trachoma* glands or lymph-follicles of the eyelid, first described by Bruch in the conjunctiva of the lower lid of oxen, and by Kleinschmidt in man and the domestic animals. By Wolfring, Stromeyer, and Blomberg they were considered pathological structures, and were named *trachoma* glands by Henle. These glands have had their lymphatic characters well determined, and as they were discovered in situations long thought devoid of such lymphoid elements, so, doubtless, other situations, as the nervous tissues, abound in lymph-centres and paths, which, from irritation, are capable of being developed into lymphatic bodies as large as any presented this evening, though previously there might have been no evidence, to ordinary methods of demonstration, of their presence.

Dr. JOSEPH G. RICHARDSON inquired of Dr. Hutchinson whether he had estimated the proportion of colorless corpuscles to the red before the patient's death.

Dr. HUTCHINSON replied that he had not.

The PRESIDENT said this was important in relation to the more usual forms of leucocythæmia. It is well known that there is a lymphatic variety in which the spleen may be but slightly affected, but it is entirely unknown that the spleen and liver should be unaffected where there is such intensity as in this. It is also well known that in some cases of lymphadenoma there is no increase in the white corpuscles of the blood. Such a case had come under his own observation, in which there was enlargement of all the lymphatic glands and the development of lymphoid tumors in the viscera. The spleen was also enlarged, and there were in it white patches, such as are found in ordinary cases of leucocythæmia, but there was no increase in the white corpuscles up to the time of the patient's death. Since it is well known that this increase is apt to be a progressive one, and since a moderate degree of increase in the number of the white corpuscles was observed some time before death in the present case, it would be very interesting to learn whether marked leucocythæmia was not developed later in the course.

Dr. HUTCHINSON said, while it is generally admitted that the increase in the number of white blood-cells in this disease is progressive up to the death of the patient, there is at least one writer of distinction, M. Jaccoud,* who takes an opposite view. In his opinion, the cells are prevented in many instances from reaching the blood-vessels, in consequence of the lymph-ducts being compressed by the increased growth of connective tissue which is sometimes superadded to the hypertrophy of the true glandular structure. Cases are, moreover, reported in which the increase of the white cells was not observed, or, having been observed, has afterwards ceased to exist.

The PRESIDENT said he was familiar with the paper referred to by Dr. Hutchinson, and could merely say that as yet the statements there made had not been substantiated, and that they certainly did not correspond with the results of his own examinations in quite a number of cases of leucocythæmia.

Dr. RICHARDSON said that in a recent case which died at the Pennsylvania Hospital he had found *one white to two red* corpuscles ten days before death. After death, the proportion was *two white to three red* corpuscles.

Dr. MORRIS LONGSTRETH said he had examined the blood after death, in Dr. Hutchinson's case, and, although he had not counted the corpuscles, he was confident that the white were more numerous than in health.

The PRESIDENT said the case to which he had alluded had been under treatment for some time at other hospitals for lumbago. He had had more or less deep-seated pain, with periodical intense exacerbations, radiating in the course of the lumbar nerves, and occasionally extending down the sciatic nerve. At the time at which he first saw him, however, there was evident enlargement of the submaxillary glands, which progressed with the enlargement of other glands.

In that case the enlargement did not go on to encroachment upon the spinal cord: still, although there was no palsy there was great weakness of the legs; and it was very evident that both the severe pain and the impairment of power were dependent upon the pressure of the enormously enlarged abdominal glands upon the nerves emerging from the spinal foramen.

Dr. F. P. HENRY presented the following specimens, with their histories:

I. Gastric ulcer.—A. H., æt. 19, admitted to the Episcopal Hospital April 18; had been sick for about three months before admission. It was impossible to get from her anything like a clear history of her case. On entry, she was much emaciated and jaundiced. There was intense pain on pressure over the epigastrium, and great pain over the same region after eating. When I took charge of the case on May 1, the girl was evidently sinking, and suffered such intense pain that the treatment from that time consisted almost solely in the use of hypodermic injections of morphia. She died on the 13th of May.

At the *post-mortem* examination a small circular ulcer was found near the cardiac orifice of the stomach. The lungs, heart, and kidneys were healthy. The liver weighed five pounds, was indurated and coarsely granular on section. It appeared to be in the first stage of cirrhosis.

The immediate cause of death seemed to be heart-clot. Firm, yellowish-white clots were found in both ventricles. There was no appearance of pulmonary emphysema, as was observed by Dr. Packard in a case of sudden death from heart-clot recently reported by him to the Society, but the lungs presented an anæmic appearance, as though the supply of blood had been gradually diminished.

An interesting feature of the case is the occurrence of cirrhosis of the liver with gastric ulcer. Rindfleisch attributes the cause of gastric ulcer to the occurrence of "small hemorrhages from the superficial venous trunks of the gastric mucous membrane," caused by "the temporary stagnation of the blood's afflux" in the act of vomiting. "The hemorrhagic infarction becomes a caput mortuum, its organic connection with the healthy mucous membrane is destroyed, and the actual separation only a question of time." This separation is greatly facilitated by the action of the gastric juice, which immediately attacks the dead mucous membrane.

In cirrhosis of the liver there is a constant obstruction to the return of venous blood from the stomach through pressure upon the portal vein, rendering hemorrhage extremely liable to occur during the act of vomiting or even independently of it. I am not aware that any frequent connection has been noticed between the two diseases, but, if so, it would seem to add additional weight to Rindfleisch's theory of the pathology of gastric ulcer.

II. Dysenteric inflammation, with cystic kidneys.—P. D., seaman, æt. 62, was admitted to the Episcopal Hospital on the 2d of May. He had been on a voyage to the French islands on the east coast of Africa, and during the passage home he had suffered from diarrhœa, with colicky pains in the stomach and bowels, and occasionally passed blood by the rectum. On the voyage home, five of his shipmates and the mate died, after complaining of the same symptoms.

The patient grew steadily worse, remedies having no control over the dysentery, and he died on May 12, ten days after admission. Three days before death he passed a quantity of blood, estimated at a quart *by the nurse*, per rectum. The *post-mortem* revealed a healthy state of all the abdominal viscera except the large intestine and kidneys. There are no ulcers visible upon the mucous membrane of the colon and rectum, which is swollen and greatly congested. The kidneys present numerous cysts of large size.

During life the urine was not examined, no symptoms pointing towards disease of the kidneys. The patient was conscious up to within two hours of his death.

Dr. BERTOLET presented a piece of ham infested with *trichina spiralis* that had been sent to him for microscopical examination. To the naked eye it did not present any abnormal appearances, although the muscular fibres were quite densely packed with the trichinæ:

* Leçons de Clinique Médicale faites à l'Hôpital Lariboisière.

this was easily accounted for by the fact that many of the parasites were still in the migratory state; others again were encapsuled, but the surrounding membrane had not yet been rendered opaque and thus visible to the unaided eye as white dots by the deposition of calcareous matters. No trichinae were found in the layers of fat surrounding the muscular tissue. The fibres of the latter still presented their transverse striations, except in the immediate vicinity of the capsules, where they were cloudy and disintegrated, while at the same time the sarcolemma and interstitial connective tissue were greatly thickened.

He stated that it was presumable that the animal had been slaughtered within a brief time after being infested. It had been ascertained by experiment that from one to three months must elapse before the capsules become opaque.

Portions of this same ham, which had been cured and smoked, were eaten uncooked by a family at Harrisburg, all the members of which were taken violently ill upon the third day, one of the cases terminating fatally in less than a week's time. The communication received did not state what symptoms the patient had presented, but generally, in those rare cases where the disease proves so rapidly fatal, there is violent gastro-enteritis, with more or less pronounced peritonitis. Usually trichinosis assumes a much slower progress, giving rise to intense muscular pains and oedema, simulating muscular rheumatism.

Dr. DE F. WILLARD presented the specimens from a case of *chronic tubercular pleurisy with large effusion*, from A. B., male, 28 years of age; admitted to the Presbyterian Hospital May 23, 1874. Walked to the hospital, and did not complain of much fatigue. The only history gleaned from him was to the effect that he had had what he called an attack of "pneumonia" (undoubtedly pleuro-pneumonia) about three months previously, which detained him in bed for several weeks. His health had been failing for some months previous to this attack, but since that he had been totally unfit for work, although he has not been under a physician's care. On admission, his left thoracic cavity was found full of liquid, but no further examination was made that night. The next day he was seized with violent dyspnoea, and died within less than twenty-four hours from the date of admission. Just before and immediately subsequent to death a large amount (a pint) of thin frothy fluid was discharged from his nose and mouth.

Autopsy, at which time was first seen by Dr. De F. W. In the left pleural cavity were found three and a quarter quarts of serum and pus intermixed with flakes of lymph. The lung was compressed into a mass about the size of two fists, and was firm and dense. Both the parietal and visceral layers of the pleura were greatly thickened, and the former could be easily detached from the inner surface of the ribs without tearing. The entire pleural surface was covered with a dense layer of whitish, tough, semi-organized lymph, with large fringes and folds which hung loose and floated in the liquid, filling the cavity. At one or two points, small, feeble bands were stretched across the space from the surface of the visceral pleura to the parietal layer. The lung, when opened, revealed a large cavity at the apex, filled with pus, and the entire condensed portion was filled with tubercles undergoing various stages of caseous degeneration. No healthy lung-tissue existed. The right lung contained a small cavity at the apex, and the upper and middle lobes were quite thickly studded with miliary tubercles. The whole lung was filled with an effusion of serum, which was undoubtedly the cause of his dyspnoea and sudden death. The heart, liver, kidneys, and other organs were comparatively healthy in their superficial appearances. The operation of tapping had been considered, but the

crippled condition of the left lung was such as to have prevented any expansion even had the pressure been removed.

The PRESIDENT asked as to the cause of this sudden death. In his opinion, it was highly important to note the peculiarities of these cases in which this shocking accident occurs, since the possibility of such a termination constitutes one of the strong arguments in favor of a timely operation.

Dr. J. EWING MEARS exhibited a small portion of the lower end of the *ileum*, removed from a child aged 2 years and 3 months, the cause of whose death was *typhoid fever*. The apparent absence of prodromic symptoms, and the rapidly fatal termination which took place, seem to make the case one of more than ordinary interest.

The case occurred in a family in which the mother had been under treatment for some time for a chronic disease. Attention was first directed to the child on the morning of the 13th inst., and treatment was asked for a condition of purulent ophthalmia of the left eye, which had suddenly developed itself. The associated symptoms of slight heat of skin, increased temperature, and coating of the tongue, were attributed to the local condition, and therefore did not attract particular attention. The statement furnished by the parents was that the child had been in apparent good health until this date,—had engaged in play with his playmates, and shown no signs of impending ill health. There was no diarrhoea, so far as could be ascertained, and tympanites was not present. The child manifested some irritability on being disturbed, obeyed, however, when spoken to, and was perfectly rational. Local treatment was directed to the eye, and a mild purgative ordered; also a febrifuge mixture; milk and beef-essence for a diet.

In the evening the condition of the patient did not appear to be much changed, except that he complained of cephalalgia. The purgative had acted, without producing hypercatharsis. The temperature and circulation were not increased.

At the next visit, on the morning of the 14th, a marked change was observed to have taken place in the condition of the patient. The pulse was 130, the temperature was notably increased, the tongue was dry, and, except the edges, covered with a brownish coating. Delirium was present, though not very active in character. An involuntary evacuation of faeces had occurred, which was of a yellowish color. There was tympanitic distention of the abdomen. The conjunctival inflammation had somewhat subsided. The symptoms continued to increase in severity until evening, when coma and convulsions occurred, in which the child died, shortly after midnight.

Sixteen hours after, an *autopsy* was made by Dr. W. H. Parish, and the following conditions noted. The dependent portions of the body were markedly discolored from hypostatic congestion. Brownish spots of varying sizes and shapes covered the trunk and extremities.

The vessels of the meninges of the brain were engorged, and sections of the cerebrum and medulla oblongata showed great congestion of the contained blood-vessels. The ventricles were empty. The medulla and upper part of the cord were firm; no evidence of softening. The lungs were normal, the heart firm and contracted. The mucous membrane of the stomach was covered by blackish deposit, which was readily removed, showing the surface normal. The liver was not affected. The gall-bladder was much distended. The adjacent intestines were much stained by contact with the gall-bladder. The spleen was enlarged and congested. The mucous membrane of the small intestine exhibited a very marked reddening, which attracted attention at the duodenum, by the contrast

with the inner coat of the stomach. The solitary glands throughout were enlarged, and Peyer's patches showed beginning ulceration. The mesenteric glands were in great numbers enlarged, varying in size from that of a pea to that of an almond. The kidneys and bladder were not examined.

In connection with this case, it is interesting to mention that on the day of the death of this child another member of the family, a girl aged 5, was attacked with typhoid pneumonia, which terminated favorably.

REVIEWS AND BOOK NOTICES.

ELECTRO-THERAPEUTICS. By D. F. LINCOLN, M.D., Physician to the Department of Diseases of the Nervous System, Boston Dispensary. Philadelphia, H. C. Lea, 1874.

When Solomon wrote, "Of making many books there is no end," he probably had in his mind's eye modern electro-therapeutics: if he had not, his prophecy was one of those generalizations which often apply so strikingly to individual cases. Probably the *raison d'être* of many of these books is the hope that they will prove efficient nets in catching practice; and we can see no other reason for the birth of the present brochure. It is a good book in many ways, free from any striking faults, but equally free from anything strikingly new. We do not think it has the charming simplicity and directness of Reynolds's book, but it is much fuller in many ways, and also has the great advantage of having good cuts, which show the various "motor points." To the novice we can commend it as an introduction to the use of practical electricity, and we doubt not that it will succeed in getting a share of the market from its older rivals.

THE MEDICAL REGISTER OF NEW YORK, NEW JERSEY, AND CONNECTICUT, FOR THE YEAR COMMENCING JUNE 1, 1874. New York, William Wood & Co., 1874.

How valuable books of the present kind are to very many persons, our readers know as well as we do. The volume before us is published under the auspices of the New York Medico-Historical Society, and, so far as one living at a distance can judge, its editor, Dr. Alfred E. M. Purdy, has done his work judiciously and thoroughly. In truth, this closely-printed book of nearly 400 pages must represent a very large amount of work on the part of Dr. Purdy, and must be a veritable encyclopædia of important knowledge to those having dealings with the profession in the region over which it has cognizance. We wish the editor would enlarge the scope a little, so as to take in Boston, Philadelphia, and Baltimore, and believe such a venture would be a financial success. Perhaps, however, the General Medical Directory preparing in this city will render this unnecessary.

PHILOSOPHERS AND FOOLS. A Study. By JULIA DUHRING. 12mo, pp. 357. Philadelphia, J. B. Lippincott & Co., 1874.

This collection of essays can scarcely be classed among medical books; but, as the authoress is a sister of one of our most esteemed contributors, and as certain of the chosen topics are subjects closely allied to important medico-social problems, we call the attention of our readers to the brochure. All of the essays are well written and clearly thought out, but we think our readers will probably most enjoy the chapter upon women. A sensible thinking woman's opinion upon that most recondite mass of potentialities and desires ought always to command respect, and when, as in the

present instance, there is freshness both of conception and of putting forth, that respect becomes heightened by the interest excited. Next to the essay upon women, and perhaps even superior to it, as more introspective, is the one entitled "Greater than Sceptres." In it is handled, with a peculiarly feminine touch, the old but ever-fresh story of love.

SELECTIONS.

ALCOHOL.—As most of our readers know, Dr. Carpenter, of London, has been a most staunch advocate of "temperance." But he has been too much for himself, and has furnished Dr. Parkes an account of his own case for publication:

"After having been a water-drinker during all the earlier part of my life, and enjoying a fair measure of health and vigor, I broke down about ten years ago under the pressure of excessive work, and, besides a local disorder, I then suffered from a total loss of appetite and enfeeblement of the digestive power, so that my whole system was undergoing a rapid lowering. My medical friends recommended me powerful tonics, combined with three glasses of sherry daily, and on this regimen I improved even more rapidly than they expected, and was able in a month's time to enjoy a tolerable dinner, gradually reducing the quantity of wine I took with it. They had at first expected that I should be obliged to winter in the south of Europe; but I rallied so fast that this idea was soon abandoned, and I was able to return to my work after a three-months' absence. Ever since that time I have taken a couple of glasses of light claret with my dinner, and this fluid suits me very well. I often reach home very tired, and feeling as if I could eat nothing, and I am certain that without this little 'fillip' I should eat nothing. The question lies, therefore, in such cases, between the use of the slight alcoholic stimulus and the inadequate nutrition of the body, and I cannot myself doubt which is the *least* of what I am willing to admit to be *two evils*."

Upon this Dr. Parkes says, "Coming from such a man, this evidence seems to me indisputable, and, coupled with that derived from watching patients with weak digestions, I think may be called conclusive."

DISEASE IN OUR BOOTS AND SHOES.—Sir James Paget occasionally gives a clinical lecture at St. Bartholomew's Hospital. On the 1st of June he gave one on "Maladies produced by Boots and Shoes," which is very well reported in the *Students' Journal*, and which possesses so much interest that we transcribe the teaching of Sir J. Paget on this important but neglected subject.

Maladies depending on the wearing of too small and badly-fitting boots are very numerous, such as deformities of the toes, bunions, corns, in-growing nails, painful bursæ, etc. In order to study deformities of the toes, said Sir James, you should obtain a good idea of a perfect foot. In a perfect female foot you find—

1. Great width and fulness of instep.
2. Well-marked great toe.
3. Long second toe, projecting a little beyond the great toe.
4. Very small, or in some cases almost suppressed, little toe.

In the male the great toe is not quite so prominent as the second. The feet of all persons cannot be deformed, nor can corns and bunions be produced in every one. It is doubtless owing to their complete reactive nutrition, the repair that takes place in the night being more than enough for the day's waste. This is not impossible when one remembers the complete repair that occurs after great muscular waste, as in

athletes. The troubles then set up in the integuments, fasciæ, and tendons of the toes are rather to be regarded as diseases set up by the pressure and friction of boots.

1. *Mutual compression of the toes.*—Naturally there is a considerable interval between the first and second toes, and in a less degree between the others, so that when the foot bears the weight of the body, each toe is free from contact with its fellow: hence, in wet clay you would receive a separate impression of each. In the deformity, though, which is produced by small boots, the toes are squeezed together, so as to form a transverse arch, the first and second toes then only bearing the weight of the body. Thus there are formed—

1. Soft corns between the toes by their friction on each other.

2. Hard corns on outer side of little toe and inner side of great toe, and projecting points pressed upon.

3. Complete immobility of the toes, except the great one. The natural mobility in civilized nations does not exist now in more than about one person in five hundred.

4. Painful bursæ between metatarsal bones.

5. In extreme cases corns and chafed spots are produced by the squeezing and rubbing together of the pads of the great and little toes.

Kid gloves, though worn continually, never cause bunions, since the kid stretches to the hands; but in the manufacture of boots, especially ladies' boots, unyielding canvas is used to line them, so that the leather is prevented from stretching and showing the true shape and size of the foot. The foot enlarges when bearing the weight of the body, and also towards evening: hence a boot thus made from a measure taken when the foot is suspended in the air, and in the morning, is too small for the foot in the evening. Women's feet are generally measured in the air, but men's when they are standing on them. The high heels in ladies' boots, too, will be always causing them to walk down-hill, however level the path may be, thus driving the foot more and more to the front. In a well-made English boot this is prevented to some extent.

II. *Deflexion of the toes* falls chiefly on the *great toe*, the result of wearing—

1. Boots too narrow in front.

2. Boots (now out of fashion) having the point in a line with the centre of the heel; the big toe, which naturally is in a line with the inner side of the heel, being deflected outwards towards the point.

3. Short boots especially. In them the great toe is brought sharply in contact with the end, and as the tarsus and metatarsus will not yield much, and the metatarso-phalangeal joint will, a deflexion of the great toe takes place outwards, and sometimes downwards. This is the most frequent and worst form. This deflexion of the great toe is the source of great trouble, as bunions occur over the metatarso-phalangeal joint, soft corns on the second, third, and fourth toes, under which it lies, and, worst of all, a total loss of movement in the great toe.

Treatment of the above deformities.—If just beginning, keep the toes apart by pads of plaster. Isinglass plaster upon felt is the best. The pad must be worn day and night. Of course, bad boots must be left off. The treatment by night is even more important than that during the day, for then especially repair goes on, and the least relaxation in the night more than undoes the good done in the day. Sometimes it has been considered necessary to divide tendons; but these do not produce the deformity: they merely adapt themselves to it. If they are divided, the deep-seated fibrous textures should be divided as well. In the worst cases the great toe has to be amputated.

Deformities of the second toe.—It is doubtful whether these deformities are due to the wearing of bad boots,

as sometimes they are hereditary. There are two kinds:

1. The last phalanx may be turned straight downwards, and is then called the hammer-toe. It is found occasionally in the other toes.

2. Extreme flexion of the first phalangeal joint. It is certainly hereditary, for it is frequently found in children who have never worn boots, but it is greatly aggravated by wearing boots, since corns form on projecting parts.

In the old classic statues the second toe projects beyond the first; but that natural type of foot is going out. The great toe seems now to project beyond the second. In people with flat feet this is always the case. Some say that the deformities of the second toe are congenital; but it is probably an early-produced disease of the fibrous textures.

Treatment.—If beginning in a child, you may cure it by applying a wooden splint below, and keeping it bandaged night and day. When deformity is more advanced, divide the flexor tendons, and apply a splint below, or a splint on the dorsum of the foot, arranged with loops. In later life it is impossible to cure the deformity; but amputation should be done at the point of extreme flexion, not at the metatarsal joint.

The third and fourth toes have no special deformities. They only suffer by being lifted up or pushed down.

The little toe sometimes is almost suppressed, from atrophy resulting from pressure.

Boots then may, besides other diseases, cause deformities which lead to the hardening and contraction of the fibrous structures around the joints.—*The Doctor.*

GLEANINGS FROM OUR EXCHANGES.

USE OF THE CATHETER IN ENLARGED PROSTATE (*The New York Medical Journal*, July, 1874).—Dr. W. H. Van Buren does not believe that the occurrence of prostatic urinary obstruction in a man who has passed the prime of life is evidence that he is beginning to "break up," or that there is little use of undertaking measures for his systematic or permanent relief. He has seen too many instances of cessation of all urgent symptoms with arrest of progressive disease by proper surgical treatment to admit that this is the right course. We have no medical remedy whereby enlargement of the prostate may be checked or dissipated, but the results which follow this enlargement when it encroaches upon the outlet of the bladder may be palliated by accomplishing the removal of the urine just as soon as possible after the natural power has given signs of failing. Commencing with the catheter early, it should be persevered in with gentleness and judgment, regularly and systematically, until a tolerance of it is acquired by the patient, and until he has been taught to use it for himself, and to rely upon it entirely for emptying the bladder. The symptoms of prostatic obstruction, and the coincident pathological changes in the urinary organs by which they are explained, might be interrupted at once by any means capable of preventing the increased muscular effort or straining which the mechanical impediment compels the patient to employ each time he attempts to pass water. The reflex nervous action constantly stimulating the bladder to spasm, the consequent dilatation, sacculation, pouching, and muscular hypertrophy of the bladder, the secondary obstruction which grows up at the outlets of the ureters, where they traverse for three-quarters of an inch the thickening walls of the bladder, giving rise to distention of these tubes and threatening invasion of the kidneys, and, sooner or later, retention of urine,

converting the passive congestion at the neck of the bladder into positive inflammation and leaving behind it a suppurating surface within its cavity, attended by symptoms of catarrh, which when once established never again entirely disappear,—all these results could be prevented if the use of the catheter were adopted early and relied upon entirely. The only exception to the relief thus afforded would be in the case of the passive congestion at the neck of the bladder already mentioned, and caused by the pressure of the prostate on the veins of the vesical plexus. Later consequences which might thus be avoided are atony of the bladder, calculus, and uræmic poisoning. If, after having learned to use the catheter once or twice in the twenty-four hours satisfactorily, the patient's calls to urinate in the intervals are still too frequent, or if the act continues to be in any respect imperfectly performed, it is evident that the pathological changes being caused by the obstruction are still progressive, and that to arrest them definitively he must make up his mind to give up all effort to pass his water in the natural way, and work up to the entire substitution of the catheter.

THE ACTION OF PURGATIVE MEDICINES (*The Practitioner*, May and June, 1874).—It is generally believed that most purgatives increase the number of the stools and render them more fluid in a double manner: first, by stimulating the intestine to increased peristaltic action, and, secondly, by inducing a discharge of fluid from its mucous surface. Some purgatives, like aloes, are supposed to act almost entirely in the former way, others, like bitartrate of potassium, in the latter, while others again, like croton oil, are supposed at the same time to increase the flow of fluid and the peristalsis. Several eminent German authors are inclined to deny that there is any increased flow from the intestinal walls, but regard the quickened peristalsis as almost the only cause of purgation, believing that the liquid stools are produced by the contents of the intestine being hurried along and expelled per anum before there has been time for the absorption of their fluid constituents. Dr. T. Lauder Brunton has lately confirmed the results of Moreau and Vulpian, by repeating their experiments, showing the falsity of this latter theory. The abdomen of an animal being opened, four ligatures were tied tightly around the small intestine, a few inches apart from each other, so as to isolate three portions of intestine. A purgative medicine was then injected into the middle part, the intestine was returned into the abdomen, and the wound sewed up. A few hours afterwards the animal was killed, and on examination the middle portion of intestine, into which the purgative had been injected, was found full of fluid, while the portion on each side was comparatively or entirely empty. Dr. Brunton has shown in this way that croton oil, elaterin, gamboge, and sulphate of magnesium, all cause a copious secretion from the intestine.

Purgatives prove useful in many ways. They hurry the food out of the alimentary canal, and thus lessen the injurious effects of over-eating. By expelling irritating substances from the intestine, they arrest diarrhoea and remove headache and other pains caused either by the abdominal irritation or by the absorption of poisonous matters produced by imperfect digestion and decomposition of food. They relieve biliousness by removing bile, and are most efficient aids in the treatment of chronic poisoning by lead, mercury, or other metals. It is probable that pepsin and pancreatic ferment are absorbed from the intestine and circulate in the blood, where the latter assists in the production of animal heat. They are then secreted anew by the stomach and pancreas, and do their work again. Purgatives lessen their quantity as well as that of the bile; they may thus be useful in fevers, but they injure old

and feeble persons, both by diminishing their calorific power and impairing their digestion. They relieve inflammation by lowering the blood-pressure and thus lessening the congestion; and they prove beneficial in dropsies, both by abstracting water from the blood and diminishing congestion in the kidneys.

DEATH FROM RUPTURE OF AN ANEURISM DURING TRACHEOTOMY (*The New York Medical Journal*, May, 1874).—Dr. J. H. Pooley reports the case of a man, æt. 34 years, who suffered from great and increasing dyspnoea, the cause of which was diagnosed to be stenosis of the trachea from pressure on it by a tumor, the character of the latter not being made out. There was also paralysis of the left side of the larynx. Tracheotomy was decided upon and was commenced, but the patient suddenly died while still on the table.

An examination of the body was made soon after death, and revealed the existence of two aneurisms, one of the arch and descending aorta, and one of the arteria innominata: both of these had become converted into solid tumors by the coagulation and solidification of their contents; they were filled with a very firm, laminated fibrin. At the lower and outer part of the innominate aneurism, near the tube of the artery which was atheromatous and softened, there was an irregular triangular rupture, with a valve-like flap of the coats of the vessel, and in the right pleura about three pints of recently-effused blood. This aneurism pressed directly on the lower part of the trachea, diminishing its calibre one-half. The aortic aneurism was twice the size of that of the innominate, and, like it, perfectly consolidated and filled with laminated fibrin of firm consistence; running over its surface, and stretched and flattened, could be seen the recurrent nerve, which was no doubt the cause of the paralysis, dyspnoea, and cough, though the pressure of the other tumor may have had its share; the lungs and heart were healthy; the aorta and other large arteries, so far as examined, were atheromatous.

THE ACTUAL CAUTERY IN UTERINE THERAPEUTICS (*Missouri Clinical Record*, July, 1874).—Dr. M. A. Pallen considers the actual cautery as one of the most powerful adjuvants in gynecological therapeutics.

The lesions for which the actual cautery may be employed are hypertrophy of the uterine fundus and cervix following parturition (sub-involution), nascent metritis (hyperæmia, infiltration, and enlargement with or without follicular erosion of the cervix), chronic metritis with induration and persistent enlargements (areolar hyperplasia), heterologous growths either pronounced or suspected (such as lupus, fungoid, and epithelioma).

In chronic metritis from sub-involution, etc., the derivative effects of the actual cautery are very beneficial.

In acute metritis after disgorgement of the cervical tissue by scarification or leeches, and a corresponding drain upon the uterine vessels by appropriate catharsis, there is no more powerful agent in the maintenance of permanent vascular contraction than the actual cautery, applied several times at intervals of ten or fifteen days. Cellulitis, peritonitis, salpingitis, parapelvometritis, and erysipelas may be classed as contra-indicants to the use of the actual cautery. After detailing the mode of procedure to be employed in appropriate cases, Dr. Pallen says,—

"One rule, almost a *sine qua non*, which I invariably follow after all severe operations upon the pelvic organs, is to bring the patient as rapidly as possible under the influence of quinine as soon as the reactionary stages indicate any increase of temperature." He has learned clinically that cinchonism to a slight degree is fraught with decided benefit.

RISE OF TEMPERATURE AFTER DEATH FROM FRACTURE OF THE CERVICAL SPINE (*The Lancet*, June 27, 1874).—Mr. A. Godfray reports the case of a sailor who fell and struck the nape of his neck with full force against the bulwarks of a ship. He had all the evidence of a fractured spine: priapism, distended bladder, complete paralysis, etc. His skin was hot and perspiring, and about five minutes before his death the temperature began slowly to rise.

Temperature 106°, as taken between the scrotum and groin, almost at the moment of death (11 A.M.). Five minutes after death (11.5), temperature 107°; 12 A.M., temperature 105.3°; 12.30, temperature 105.2°.

Temperature in rectum 109° (12.30), as compared with 105.2° in groin; temperature 108.2°, 1 P.M.; 107°, 1.30 P.M.; 106.2°, 2 P.M.

The possible causes which may serve to explain the extraordinary rise of temperature observed in this case are the following:

1. Contraction of muscles throughout the whole body—*i.e.*, rigor mortis.
2. Contraction of cutaneous capillaries, tending to continuation of circulation in deeper parts, whilst forming a non-conducting blanket generally.
3. Paralysis of the nerve-centre regulating or inhibiting the temperature of the body; cause unknown.

ANAL ULCERATIONS (*New York Medical Journal*, July, 1874).—Drs. Peau and Malassez, in their work entitled *Etudes cliniques sur les Ulcérations anales*, enumerate the following causes and plans of treatment:

Erythema of the anal region may be induced and caused by foul discharge, copious sweating, hemorrhoids, pediculi, pruritus, want of cleanliness, obesity, long walks, badly-fitting and rough clothes. One or more of these conditions may co-exist in the same case. The erosions of the integument result from this erythematous condition, and they may be seated around the margin of the anus, in the sphincteric portion, and in the folds. They have a bright-red surface, ordinarily studded with little whitish points. They exhale an offensive odor, and their presence renders defecation painful. In some cases they become chronic. The treatment consists in carefully drying the parts, and avoiding chafing, and in the application of mild astringent lotions, starch in powder, lycopodium, and subnitrate of bismuth, with the interposition of soft linen. Repose is often very necessary. When internally situated, tampons saturated in glycerole of tannin or other astringent solution are very beneficial. When vaginal discharges, hemorrhoids, or worms exist, attention must be paid to their removal.

DIPHTHERIA (*The British Medical Journal*, May 9, 1874).—At a meeting of the Medical Microscopical Society, Dr. Greenfield read a paper upon "Diphtheria," founded upon the microscopical examination of specimens from five cases. The author stated his belief that the obscurity and doubt which still seemed to exist upon the origin and structure of the diphtheritic false membrane arose, in part, from the confusion in the nomenclature in common use, especially the fact that "croupous" and "diphtheritic" were terms used in different senses, clinically and histologically. An examination of his cases showed in all the larynx and trachea the mucous membrane, and usually the deeper tissues, in a state of more or less intense inflammation of ordinary character; whilst the false membrane consisted, for the most part, of a stratified net-work of a substance giving the reactions of fibrin, in the meshes of which were contained altered epithelial cells. The amount of adhesion to the mucous membrane was various, but in no case did the exudation actually pass into its substance, although in some cases it appeared adherent by fibrinous bands to the papillæ. He stated

his belief that the false membrane consisted in part of a catarrhal process, with modifications in the epithelium, and in part of a true fibrinous exudation.

A SIMPLE METHOD OF REDUCING THE DISLOCATION OF THE FORE-ARM BACKWARDS (*The New York Medical Record*, July 1, 1874).—Dr. Alexander Murray relates a case of the above dislocation which he reduced in the following manner:

He took his position at the outside of the dislocated arm, and placed the palm of his right hand to the palm of the patient's left, dovetailing his fingers between each of those of the latter. In this way he had secured a firm hold to make extension. He then placed his elbow as a fulcrum and for counter-extension on the fore-arm in front and against the lower end of the humerus, and by a steady pressure downwards and backwards, and at the same time flexing the fore-arm towards the shoulder, caused the luxated bones in a few moments to slip into their natural place.

If the injured individual be too weak, or unable to stand erect, he should be seated sideways on a chair, and made to grasp its back firmly with the sound arm, while the surgeon takes his position at the side of the injured limb parallel to the patient.

HYDRATE OF CHLORAL IN NOCTURNAL INCONTINENCE OF URINE.—Dr. Vecchietti Eduardo has successfully treated several cases with this drug. He believes that idiopathic nocturnal incontinence is due to hyperæsthesia of the bladder, and that chloral acts as an anæsthetic of the great sympathetic.

FRECKLES (*The Druggist*, February, 1874).—Powdered nitre, moistened with water and applied to the face night and morning, is said to soon remove all traces of freckles.

MISCELLANY.

THE APOTHECARY'S OATH.—Who is the guardian saint of the apothecaries we do not know; but somebody has disinterred an ancient oath which formerly had to be taken by every French pharmacist. It runs thus:

"I take to witness, before all, God the Creator of the Universe, in three persons, that during the whole of my life I will observe that which follows:

"I will live and die in the Christian faith. I will honor my parents. I will honor the physicians and masters under whom I have studied. I will never say anything that shall be injurious to the seniors of our order, or to others. I will adorn with my best the dignity of the art, and I will not reveal its secrets. I will do nothing imprudently nor through hope of gain. In acute sickness I will not give purgatives without the order of the physician. I will not touch the secret parts, except to apply remedies to them. I will keep the secrets of the patients. I will administer no poison, neither will I allow it to be administered, even to my enemies. I will not give an abortive remedy, even to provoke the expulsion of a fœtus, except upon the order of a physician. I will not alter the prescriptions of physicians. I will never substitute one remedy for another without their knowledge. I will discourage the fatal practice of empirics. I will refuse to no person my legiti-

mate assistance. I will not keep in my pharmacy stale or badly prepared medicaments.

"In making and observing these rules, may God assist me. *Ainsi soit-il!*"

That is not such an antiquated oath but that we should like to see it revived and respected.—*Medical and Surgical Reporter*.

In a late issue, our venerable cotemporary the *Medical and Surgical Reporter* most gallantly takes upon itself the defence of the oppressed sex. Some one, it seems, not having the fear of his wife before his eyes, or, more probably, being an unregenerate bachelor, "has asserted that a woman has never invented any really valuable mechanical device." Our learned editorial brother "rejoices, therefore, to borrow from a contemporary that Mrs. Ella N. Gaillard has recently invented"—a needle.

M. HARDY, one of the Professors of the School of Medicine in Paris, was recently denounced by the *Univers* for classing the confessional among the predisposing causes of insanity, and the students, by way of protest against the clerical party, saluted M. Hardy, on his resuming his course of lectures, with a double round of applause. The *Univers* stigmatizes them as "irreverent sawbones."

THE state of Dr. Hugh Bennett's health is such as to preclude all idea of his spending the winter in Scotland, and he has, therefore, resigned the chair of physiology at the University of Edinburgh. The principal candidates for the chair, according to recent advices, are Dr. Rutherford, of King's College, Dr. Bell Pettigrew, and Dr. McKendrick.

DR. BURDON SANDERSON has been appointed to the chair of anatomy and physiology in the University College, London, recently vacated by the resignation of Dr. Sharpy, who had held it over forty years.

DR. HENRY HARTSHORNE, of this city, has been invited to attend the next meeting of the British Association as the guest of the Association.

BISHOP LINCOLN is reported to have preached at Westminster Abbey a sermon against cremation, because "it would endanger the doctrine of the resurrection"!!

DR. LEMUEL J. DEAL, of this city, has recently been elected to the chair of chemistry in the Missouri Medical College, St. Louis.

NOTES AND QUERIES.

TO THE EDITOR OF THE PHILADELPHIA MEDICAL TIMES:

SIR,—In the number of the *Medical Times* dated July 4 is a letter signed "A Medical Officer," which is, I think, likely to give rise to mistaken views on the part of the profession in relation to the matters of which "A Medical Officer" writes. I cannot but think that the writer of the letter in question is mistaken in several particulars, and especially in thinking that he expresses the views of the medical staff of the army in calling upon the American Medical Association to take action upon the points specified.

As to the first point: I know of no order which gives a line officer authority to decide, when a medical officer is present with his command, whether an enlisted man shall or shall not be allowed to go on the sick list. Nor am I acquainted with any medical officer of the army who would per-

mit such an assumption of his duties, involving, as it would, injustice to the soldier and discredit to his own position, without making a prompt protest to his immediate commanding officer, or, if necessary, to higher authority.

In the only instance in which I have found it necessary to make such a protest, the commanding officer of the post promptly informed a lieutenant who had refused to permit an enlisted man of his company to go to the doctor at sick-call, that he had no right to do so, and in future must not decline to send to the doctor at sick-call any man of his company who reported himself sick.

It is well understood in the army that every officer and enlisted man reporting himself sick has a right to the opinion of a medical officer as to whether he is or is not able to perform his duties, and that this decision is final.

In the company sick-books which have been in use for several years past, the following certificate is printed at the bottom of each page:

"The above cases have been examined by me before being sent to the surgeon.

"NOTE.—To be signed by any commissioned officer of the company."

I have heard company officers argue that the right to decide who shall and who shall not be allowed to go to the doctor is implied in this certificate, but I have never known such a claim to be admitted by a medical officer or sustained by a post commander.

The reason for having the men who report themselves sick examined by a company officer before being sent to the doctor, appears to me to be evident, and the practice to be a good one.

The company officer, having a more intimate acquaintance with the character and habits of his men than the doctor is supposed to have, may give him information which will assist him in forming an opinion as to the nature or cause of the disease from which the man professes to be suffering, or in deciding whether he is malingering. This information may be conveyed in the form of a remark opposite the man's name, or as a message sent by the sergeant who acts as sick-marcher. Thus, the remark may be made, "confirmed malingerer," "drunk yesterday," "old soldier," "reliable man," etc., etc. To a medical officer who has recently joined a command, such information is of great value, as the "dead-beats" are very likely to attempt to impose upon him, and may succeed unless he is well on his guard.

As to the propriety of always assigning medical officers strictly according to their rank, there is certainly room for a difference of opinion. If a medical officer when he arrived in a department were allowed to select any station he preferred among those occupied by his juniors, and the junior thus displaced to oust any one below him on the list, it would lead to a constant change of station, prejudicial to the interests of the service, and involving great inconvenience and pecuniary loss on the part of medical officers. Again, if the medical officers were "by law allowed to claim precedence of posts according to rank," the interests of the service would often suffer, by the more experienced selecting small and unimportant posts because they were in desirable locations, while posts of greater importance, by reason of their large garrisons, or location in the vicinity of hostile Indians, would be left to those who had recently entered the service.

The right of a medical officer to a choice of station according to his rank and previous services is generally recognized by medical directors so far as is consistent with the interests of the service and the rights of his juniors. The present system of changing medical officers from one department to another about once in three years seems to me to be an excellent one, and to be based upon a desire on the part of the Surgeon-General to do justice to all. So far as I have been able to ascertain, it gives general satisfaction to the medical staff of the army.

ASSISTANT-SURGEON.

OFFICIAL LIST

OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U.S. ARMY, FROM JULY 21 TO JULY 27, 1874, INCLUSIVE.

WRIGHT, J. P., SURGEON.—To report in person to the Commanding-General, Department of the Missouri, for assignment to duty. S. O. 159, A. G. O., July 23, 1874.

PHILLIPS, H. J., ASSISTANT-SURGEON.—Relieved from duty in Department of the Columbia, to proceed to New York City, and on arrival report by letter to the Surgeon-General. S. O. 159, c. s., A. G. O.

CRONKHITE, H. M., ASSISTANT-SURGEON.—Granted leave of absence for sixty days, to take effect no later than September 1, 1874, providing he furnishes a suitable substitute during his absence. S. O. 35, Military Division of the South, July 23, 1874.

CHERBONNIER, A. V., MEDICAL STOREKEEPER.—To report in person to the Surgeon-General of the Army. S. O. 160, A. G. O., July 24, 1874.

SATURDAY, AUGUST 8, 1874.

ORIGINAL COMMUNICATIONS.

THE PATHOLOGY OF CHOLERA INFANTUM.

BY DR. A. NEBINGER.

Read before the Philadelphia County Medical Society, April 8, 1874.

WE need not say that, even at this late day, the nature and the primary lesions of cholera infantum are matters of doubt, therefore of discussion by writers and teachers of nosology and by practitioners of medicine. There are those who contend that cholera infantum is primarily a gastro-enteric malady *per se*, others, that it is a hepatic gastro-enteric disease,—the liver being the organ originally involved, and the gastro-enteric morbid phenomena and lesions the results or secondary effects of the hepatic disturbance. The question being an open one, we propose examining it and making some remarks upon what we consider the nature of the disease and its primary seat of morbid influence.

The anatomical lesions in cholera infantum which present themselves upon a post-mortem examination are such as indicate derangement of the liver, stomach, and bowels. The portal vessels have been found largely congested, and some investigators have reported cases where an enlargement of the liver existed. The gall-bladder has been found containing a large amount of thick, acrid, viscid bile. In some cases the gall-bladder has been found quite empty. Not a single case, as far as we are aware, has been reported by an undoubted investigator, where the gall-bladder was found containing normal bile. The gastric mucous membrane has been found inflamed, ulcerated, softened, and its follicles enlarged. The mucous membrane of the small intestines has revealed inflammation and ulceration; the glands, solitary and acuminate, enlarged; the mucous coat of the colon has evidenced inflammatory softening. Thus, it is seen, we have cholera infantum revealing, post-mortem, extensive derangements of the liver, stomach, and bowels. Here then let the question be asked, is cholera infantum primarily a disease of all the organs and tissues named, or has it its origin in one only? Does it at once present itself as a hepatic gastro-enteric disease, or is it primarily confined to one of these organs or parts, and gradually or rapidly, as may be, spread itself from one to another, until the whole train or series of the morbid conditions which exist in cholera infantum are produced? These questions have been variously, and in some instances curiously, answered by high authorities. Dr. George B. Wood says, "Cholera infantum may be safely inferred to consist essentially in an irritation or inflammation of the alimentary mucous membrane, directed especially to the mucous follicles, and associated with a congested and torpid state of the liver, probably depending upon the same cause."*

Dr. Robley Dunglison, in his article upon cholera infantum (*The Cyclopædia of Pract. Med.*, 1850, vol. i. p. 427), observes, "that the liver is almost always enlarged, and that this has been regarded as the primary affection." Dr. J. F. Meigs, *Pract. Treatise on Diseases of Children*, 1848, p. 297, says, "I am disposed to believe that cholera infantum is a disease of the mucous membrane of the alimentary canal, which, beginning with morbid development of the mucous follicles or crypts, independent of evident inflammation, occasions first super-secretion from these organs, and after a time runs into inflammation and its results, ulceration, softening, and thickening." Dr. Condie, *Diseases of Children*, 1850, p. 234, remarks in reference to cholera infantum, "that comparing the symptoms during the life of the patient with the appearances discovered after death, it would appear to depend in its earlier stages upon hyperæmia of the mucous membrane, with an augmentation of the functions of the muciparous follicles of the alimentary canal." Dr. Dewees regarded "the congestion of the portal vessels and the enlargement of the liver as secondary effects."

It is unnecessary to further quote the various, somewhat discordant, and at best indefinite opinions entertained and put forth by authorities in regard to the nature, primary seat, or starting-point of action of the morbid influences in this very interesting disease.

Before advancing further, we take opportunity to remark that we do not regard the gastro-enteric phenomena of cholera infantum as primary, but secondary conditions, hence that neither the stomach nor the bowels are originally involved.

Observation, reflection, and the results of the treatment to which we have submitted cholera infantum patients, have brought us to the conclusion that exalted solar heat, long continued, acting upon and through the nervous system, upon the liver, is the cause, and that organ the primary seat of disease, from which radiate all the terrible morbid action, etc., which make up the *tout-ensemble* of cholera infantum. Follow, if you please, while we endeavor to present some of the facts, and construct the argument upon which, legitimately, we think, is based the conclusion that the liver is the primary seat of disease in cholera infantum.

1. The portal vessels are largely congested, the liver sometimes enlarged, the gall-bladder contains in some instances a dark, acrid, viscid secretion, in other instances it has been found nearly or quite empty, but the bile when found has always been abnormal.

2. The season when the disease occurs is summer, or in other words in hot and oppressive weather, and the cases are greater or smaller in number, and more or less grave, and the fatality much or little, as the temperature is very exalted or otherwise and continues for long or short periods. July and August are the months which have the more exalted temperature, and when such temperature is most protracted; they are the periods when the bills of mortality of our cities are much increased in their

* *Pract. Med.*, G. B. Wood, 1847, vol. i.

aggregate numerical amounts by the records of the deaths produced by cholera infantum.

3. Hepatic derangements are emphatically the diseases of the tropics and warmer latitudes of the temperate climates. Nearly all the diseases of the tropics, and a large number of those of the hotter latitudes of the temperate zones, involving the alimentary canal, are complicated with hepatic affections. The diarrhœas are not simple diarrhœas consisting of merely an irritation of and a hyper-secretion or effusion from the mucous membrane of the intestines, but are bilious diarrhœas. So of the dysenteries, they are not simply such, but they take upon themselves a bilious type. The converse of all this is true of the enteric diseases of the cold climates. Exalted temperature long prevailing in the tropics is the predisposing and often exciting cause of the peculiar or bilious enteric diseases of those regions. The predisposing and exciting cause being absent in the cold latitudes, the complications of liver disturbances are also absent.

Permit me here to digress and by the way of an episode to remark that in bilious dysentery and in bilious diarrhœa the liver, with but rare exceptions, becomes first involved, the bowels subsequently as a result of the abnormal condition of that organ.

It will not perhaps be denied that congestion of the portal vessels, the pouring into the intestinal tube of acrid bile, may give rise to all the phenomena which present in bilious dysentery and in bilious diarrhœa. Certain it is that it is the experience of many, that all remedies which may be addressed to the bowels for their relief, if we overlook the great importance of relieving the liver and of correcting its secretion, will at best prove but little better than palliatives, whilst if regarding the necessity referred to, such remedies as address themselves specially to the liver, relieving it of its engorgement and normalizing its secretion, be employed, such diseases will speedily yield to treatment.

4. The morbid conditions of inflammation, ulceration and softening of the mucous tissue of the intestinal canal, the enlargement of the glands, solitary and acuminate, are not peculiar to cholera infantum, but are present in fatal cases of enteritis, dysentery, etc. Yet these diseases do not exhibit the ante-mortem phenomena which give to cholera infantum its special, if not peculiar, aspects.

5. Infancy is the period of life when mankind are most prone to attacks of inflammatory and congestive diseases, favored doubtlessly by the greater degree of irritability existing at this period of life in all the organs and tissues. As we have advanced, we have seen that hepatic derangements and particularly bilious complications of enteric affections are the diseases of the tropics, or, in other words, of protracted exalted atmospheric temperature. We have seen that cholera infantum is a disease coincident with the hotter months of summer in this latitude. If the protracted exalted heat of the tropics is the great predisposing and exciting cause of the hepatic diseases and hepatic complications there, may it not be reasonably inferred, that the

protracted exalted temperature of the canicular days here is to the more irritable or susceptible liver of infants, what the heat of the tropics is to the liver of those who are within the range of its influence? Removal from the tropics to cold or cool latitudes by those afflicted with entero-hepatic diseases of a benign type is followed by restoration of the liver and bowels to their normal condition. Removal of cholera infantum patients from the heat-exalted atmosphere of our cities to the cool atmosphere of the country, and particularly to the ocean-side, is followed by a speedy restoration to health. The tropical invalid when in the cold latitudes is no longer subjected to the predisposing and exciting cause of his entero-hepatic disorder, and, without the use of medicines culled from the diversified departments of the *materia medica*, casts off the habiliments of disease, and robes himself in the attractive costume of health. A return of the health-restored tropical invalid to his hot clime is too often followed by a return of his disease. A return to the city during the dog-days of the convalesced cholera infantum patient is followed by a return of the disorder, ending too frequently in death. How wonderful the analogy of these diseases under similar circumstances, springing up under like conditions, relieved, nay, cured, by the same hygienic management! Having causes and effects so remarkably alike in some of these prominent phenomena and habits, to what other safe conclusion can we arrive than that there exists an identity between the organs primarily affected and the cause affecting them? But the pathologist who teaches that cholera infantum is primarily and continuously a disease of the alimentary canal, asks, have we not revealed post-mortem traces of inflammation, ulceration and softening of the mucous coat of the intestines, and inflammation and softening of the mucous tissue of the stomach? To all of which we answer in the affirmative. In turn, we ask, does not a great organ, which in the discharge of its functions is as important as any of those previously named, exhibit undeniable evidence of morbid action? Does not congestion and sometimes enlargement of the liver exist? Does not the gall-bladder contain an acrid or otherwise vitiated secretion, and is it not sometimes entirely free from its peculiar fluid? Has not the total absence of normal bile been the universal post-mortem revelation in cholera infantum? Have all these conditions no legitimate interpretation? Must they be viewed as merely accidental, or incidental, as it may suit the taste, fancy, or prejudice of the pathologist? We are ready to declare that when taken into consideration with all the circumstances, and all the phenomena of the disease in the living and the dead, they stand out in bold relief upon the foreground of the picture, as its most attractive and most interesting features.

If the presence, post-mortem, of lesions in the abstract, without consideration of the phenomena of the disease, which present during the lifetime of the patient, will warrant a conclusion in regard to its nature; why separate, in the disease under consideration, the morbid conditions outside of the lesions of the stomach and bowels, from them, and

consider the disease an enteric, gastric, or gastro-enteric malady? Why not group all the lesions, make a unit of them, and consider the disease a hepatic gastro-enteric disorder, primarily and continuously? If we refuse to do this, by what authority, by what common-sense rule, shall we, after discovering lesions of the liver, stomach, and intestines, close our eyes to the liver lesions, and determine the nature of the disease by the other morbid anatomical conditions? Would it not be wiser to group all the lesions, forming an entirety of them, and thus regard the disease as a hepatic gastro-enteric disorder? In doing this, while we will not determine where the disease commenced, in which tissue or organ it first manifested itself, we shall at least not deduce a conclusion prejudicial to any of the organs involved, and therefore our conclusions will be less liable to beget an injurious or negative treatment. The opinion in a general way is regarded as being correct, that it is largely an impossibility, in most diseases, to determine their nature by a consideration of the morbid conditions which are revealed after death, independent of, and out of association with, the morbid phenomena exhibited during life. Lesions revealed post-mortem and the morbid phenomena presented during life must be studied together, each given its true weight and value to enable the pathologist to solve the problem and to accurately determine the true pathology of most disorders. Hence, to determine the nature of cholera infantum, what organ or organs become primarily diseased, whether the liver, the gastric, the enteric mucous membrane, or all combined, we must examine and hold under due consideration not only the post-mortem exhibitions, but the morbid phenomena presented during life. Let us therefore inquire what are the chief of the living phenomena. Vomiting and purging; the stools sometimes, though seldom, evidence the complete absence of bile, but generally the presence of a vitiated hepatic secretion. As the disease progresses, aqueous or serous matter makes up the major part of the evacuations. In violent attacks there is great frequency of stools, accompanied with rapid emaciation, great exhaustion, and even collapse, giving the disease, under such circumstance, a marked analogy to cholera.

Having called before us some of the living revelations of the disease, we will unite them with the lesions discovered after death, take them as our guides in the exploration which we are about to make, and see to what rational conclusions they will lead us. We have already learned that after death congestion of the liver exists, that the gall-bladder is either empty or contains an acrid secretion. At the very dawn of the disease the discharges from the bowels are free from bile, or if there is any present it is abnormal. So far the morbid phenomena during life and the revelations after death are in accord. Frequently, independent of the presence or absence of abnormal bile, we have large and frequent discharges of serum from the bowels and the stomach, and mucous matter is often present in the stools. As the serum and mucous matter are the results or products of a diseased en-

teric and gastric mucous membrane, the diseased condition of that membrane necessarily preceded the phenomena of which they were the ultimate products. How shall we account for the origin of the diseased condition of the mucous tissue of the stomach and bowels? Thus: having seen as a first revelation during life that the hepatic action was abnormal, we have gained an important stand-point from which to make further observations. Regarding the liver as having its portal vessels congested and this the cause of its functional derangement as exhibited in either the non-secretion or the secretion of abnormal bile, we will endeavor to see what would be the effects of such condition of the liver and a vitiated bile, or the entire suppression of the secretion of that fluid, upon the stomach and bowels. When congestion of the portal vessels which ramify through the liver takes place, there must necessarily follow a damming up behind them of the blood in the channels through which it flows, and, as a sequence, a throwing back of the current upon its source; the capillary rete of the mucous membrane of the stomach and bowels being the source from whence the liver receives its supply of portal blood, when the portal vessels of the liver are congested, as a result of such congestion a congestion of the gastric and enteric mucous membrane takes place by necessity, giving origin to irritation of the mucous follicles, effusion, or hyper-secretion,—the effusion being nothing more or less than an exosmotic action of the venous capillaries of the enteric and gastric mucous membrane. Thus we account for the large and exhausting serous discharges and part of the morbid condition of the mucous membrane of the stomach and bowels, as secondary results of the congestion of the liver.

Simultaneously with the congestion of the mucous membrane of the bowels and the exosmotic action of its venous capillaries, we have acrid bile thrown into the intestinal tube, producing in the highly irritable and very delicate mucous tissue of a babe's bowels follicular enlargement, ulceration and thickening, to say nothing of inflammation, all secondary conditions, resulting from the congestion of the liver. Then we have vomiting, persistent and exhausting. May not this be, is it not indeed, the result of irritation and congestion of the gastric mucous membrane, produced by the acrid secretions of its glands and follicles, arising from the congestion of the gastric capillary rete, produced, as already stated, by congestion of the liver? Add to all this the great probability of morbid influences being transmitted from the bowels, and then say if the account will or will not embrace all that may be necessary to produce the gastric morbid phenomena presented during life, as well as all the lesions which are present after death, in the stomach. Having traced, step by step, the predisposing and exciting cause, the phenomena, the parts involved, and the lesions which make up the totality of this interesting disease, in the regularity, to a certain extent, of their succession, we trust there is good and sufficient cause to consider, certainly for not rejecting hastily, the conclusion that in cholera infantum the liver is primarily diseased, and that

the gastric and enteric disturbances are secondary to, and hence the offspring of, the hepatic congestion, thus indicating that the nature or pathology of the disease consists primarily in congestion of the liver, followed by, and continuous with, and depending upon it, derangement of the bowels and stomach.

The definite fixing of the original or primary seat or starting-point of this disease is all-important, as regards the character of the treatment it should receive from its incipency to its close. It is of great, nay, almost of vital, importance to the little cholera infantum patient, whether the physician shall regard the enteric and gastric mucous coats, the primary and (may we not add?) the only seat of disease, and the nature of the malady, an enteric and gastric irritation only, or that the disturbance of these tissues, although very active, yet secondary to and dependent upon the congestion of the liver. The physician in his treatment will necessarily be influenced by the pathological view which he may adopt in regard to the disease; hence the importance of the adoption of a correct one.

Before closing, we cannot forbear venturing the opinion that it fully accords with the observation of every medical gentleman, who has paid much attention to this disease, that it cannot be considered as presenting a truly favorable and yielding aspect until the stools evidence the presence of normal bile. If the declaration which we have just ventured be true, as we believe it to be, it points with much force to, and is highly suggestive of, the liver being the important and controlling seat or centre of the malady. Do what we may, treat the disease as we please, the fact still remains, if we fail to produce a flow of normal bile our patient remains ill, with perhaps the malady moderated, not cured: the gastric irritability may have subsided, the evacuations from the bowels be less frequent, less copious, less aqueous, but unless we have normalized the hepatic secretion, our patient will remain in a doubtful condition. Normalize the bile: this done, every bad symptom begins to pass away, and convalescence dawns. Such has been our experience, and, comparing notes with our brethren, we have no cause to be dissatisfied with that experience.

ANIMAL LIGATURES.

BY JOS. BERENS, M.D.

IN his very able article on Ligatures, published recently in the *Philadelphia Medical Times*, Dr. J. R. Haynes concludes that there is no better ligature than silk. The following experiments would seem to show a different result. In the experiments of Dr. Haynes there are not a few grounds for fallacy, or, at least, obstacles to correct deductions. Thus, ligatures of different materials were often applied to the same vessel at the same time, and so close together as materially to interfere with any accurate observation of the separate results. Vessels

were invariably chosen so deeply seated as to insure a great disturbance of tissue in reaching them, which, together with the distance of the ligature from the surface, must necessarily have to a great degree impaired the development of symptoms peculiar to the material of the ligature. In many of the experiments, cats were used,—animals which the writer, after over a dozen trials, gave up as altogether unfit for the sort of work in hand, on account of the peculiar nature of their skin, and the strong tendency always existing in them to very great suppuration. Finally, sufficient care was not taken in conducting the experiments to oppose the results derived from the employment of different materials.

In the following experiments these sources of error have been, as far as possible, avoided.

The main points to be decided seem to be, whether any material can be employed for ligatures which will not be more irritating than silk, yet hold the vessel as well, and, in addition, be ultimately absorbed; the object being to obtain in the ligature a body that will be as little as possible foreign to the wound, not only in respect to its irritating qualities proper, but also with regard to the amount of it to be left in contact with the raw surfaces; that is, to get a substance causing so little irritation, and being so readily absorbed, that after securing a vessel the ligature may be cut off close to the knot and the wound closed over it.

With reference to the points involved, three methods of procedure were adopted: 1, setons of the different materials were placed side by side, beneath the skin of dogs. By noting from time to time the effect of these setons in the swelling and general inflammatory symptoms they produced, also the effect of the surrounding tissues upon them, and, finally, by laying open the track in which they lay and observing the condition of affairs within the wound, very effectual comparisons could be drawn in regard to their relative irritating properties, as well as their absorbability.

These experiments were then verified by placing knots of the different materials under the skin. After this, ligatures of the different materials were applied to the arteries of the animals, by which means their qualities in this respect were tested under circumstances very similar to the conditions to which they would be subjected in their employment on man.

The materials experimented with were the imported carbolized gut, prepared on the Lister method, uncarbolized gut, the smallest size guitar-string, peritoneum cut into strips and rolled, as recommended by Dr. Agnew, and beef-tendon dried, split into fine shreds, and twisted. Silk was generally used, also, for the sake of a standard of comparison.

The setons which will be now discussed were, in general, about equal in thickness to three strands of ligature-silk, and were about three inches long. These setons were introduced by means of a long needle, with the production of as little irritation as possible; they were placed side by side, and about an inch and a half apart.

CASE.	TIME.	SILK.	CARBOLIZED GUT.	UNCARBOLIZED GUT.
I.	24 hours.	Inflammatory symptoms.	Slight inflammatory symptoms.	No symptoms.
	48 hours.	Marked welt, and plentiful discharge.	Marked welt; a drop of pus could be squeezed out.	A very slight welt, but no pus.
	3d day.	Unchanged.	Symptoms increased.	No change.
	5th day.	Unchanged.	Much improv'd.	No symptoms.
	12th day.	Opened track, and found much inflammation and excavation.	Symptoms sl't. The seton parted in middle upon slight traction; it had been very nearly absorb'd. Opened, and found slight inflammation.	No symptoms. The seton had been absorbed in centre, and one end had fallen out. Opened, and found track partly healed, and inflammation very slight.
II.	24 hours.	Welt, but no discharge.	Slight welt; no discharge.	Slight welt; no discharge.
	48 hours.	Tolerably well-marked welt, and slight discharge.	Marked welt, and discharge.	Unchanged.
	4th day.	No change.	Welt not so marked, sl't discharge.	A little pus could be pressed out.
	5th day.	No change.	Some improvement.	No welt; no pus.
	10th day.	No change. Open'd track, and found well-marked inflammatory symptoms.	Slight welt; no pus; ends of seton separated on sl't trac'n. Opened, there were few signs of inflammation.	No change; seton still pretty firm. Opened, and found seton reduced to fine thread, with little or no inflammation.

CASE.	TIME.	SILK.	CARBOLIZED GUT.	PERITONEUM.
III.	24 hours.		Symptoms not marked.	No symptoms.
	48 hours.		Moderate welt and discharge.	Small welt, no pus.
	4th day.		Symptoms increased.	Decided welt, and brisk discharge.
	9th day.	A moderate welt, and sl't discharge persisted throughout. On opening, marked inflammatory symptoms were found.	Symp'ms much improved. Opened, and found seton softened, and much reduced in size, track not much inflamed.	No change. Opened; seton not much reduced, inflammatory symptoms well marked.
IV.	24 hours.	Slight welt.	No symptoms.	Slight welt.
	48 hours.	Slight welt and a little pus.	Slight welt and discharge.	Marked welt and free discharge.
	4th day.	Unchanged.	Slight welt and discharge.	No change.
	7th day.	Unchanged.	Slight welt; no discharge.	Symptoms improved.
	10th day.	No change. Opened, and found the track very red and inflamed.	No change; seton separated upon slight traction. Open'd; there was scarcely any sign of inflammation.	Slight welt and discharge; seton still firm. The track was much inflamed and excavated.

CASE.	TIME.	SILK.	UNCARBOLIZED GUT.	TENDON.
V.	24 hours.		No symptoms.	No symptoms.
	48 hours.		Slight welt.	No symptoms except slight welt.
	3d day.		Welt a little more mark'd, slight discharge.	Slight welt, no discharge.
	6th day.		Unchanged.	Unchanged.
	12th day.	The inflammation throughout has been but slightly marked.	No symptoms. Intermediate portion of seton absorbed.	No symptoms. Seton reduced in size; parted on slight traction.

CASE.	TIME.	SILK.	UNCARBOLIZED GUT.	TENDON.
VI.	48 hours.	Slight welt, but marked discharge.	Slight welt, no pus.	No symptoms.
	3d day.	Unchanged.	No change.	No change.
	4th day.	Improved.	Welt almost disappeared.	No symptoms.
	10th day.	Marked welt, and brisk discharge.	Scarcely any welt perceptible. The seton reduced to fine thread which separated very readily on slight traction. On laying open the track, but slight inflammatory symptoms could be discovered.	No symptoms. By exerting considerable force the seton separated. It was flattened and much reduced in size. Laying open the track revealed no signs of inflammation whatever.
		Opened, and found decided inflammation and suppuration.		
VII.	48 hours.	Welt well marked; very little pus.	A slight welt.	No symptoms.
	3d day.	No change.	Moderate welt, and discharge.	Small welt, no pus.
	5th day.	No discharge, but marked welt.	No discharge.	No change.
	10th day.	Discharge and welt. Open'd, the track of seton very much inflamed.	Symptoms very slight. Intermediate portion of seton has been absorbed, and one of the ends fallen out. On opening the track, very slight inflammation could be discovered.	No symptoms. Upon attempting to withdraw the seton it refused to come. Laying open the track revealed the seton buried in the tissue, and apparently adherent, creating not the slightest disturbance.
VIII.	24 hours.	A welt.	Slight welt.	Slight welt.
	48 hours.	Pus and welt.	No change.	No change.
	3d day.	No change.	Welt much diminished.	Welt barely perceptible, but a drop of pus could be pressed out.
	6th day.	Pus flowing freely; the dog's back is wet with it.	Scarcely any swelling.	No swelling, no discharge.
	7th day.	Opened, and found the inflammation marked.	Opened; inflammation exceedingly slight. Seton reduced to one-third its size.	Upon attempting to force the director through the track, great difficulty was experienced. The seton was found flattened, and bound down by bands of tissue thrown over and around it. The track was apparently healed completely, with the seton <i>in situ</i> . Seton not diminished much in size.
IX.	48 hours.	Marked welt, no discharge.	Slight welt.	Slight welt.
	3d day.	A little pus could be squeezed out.	Moderate welt, and discharge.	Well-marked welt, no pus.
	7th day.	No change.	All symptoms have disappeared.	Welt much reduced.
	13th day.	Slight welt, no pus. Opened, and found but slight inflammation.	No change. Opened, and found slightest possible inflammation at one end, where portion of seton still remained, the other part having dropped off.	Nothing to mark the track but the protruding ends of the seton, which was reduced to a few loose shreds. The inflammation was less, if possible, than that in the case of the gut.

A large number of experiments with setons, similar to those the notes of which are given, were performed. The cases quoted have been selected with the view of presenting the average result. The animals used were dogs, the hair being either shaved or trimmed close over the tracks of the setons. Cats were also used to some extent, but, proving unsatisfactory, owing to the peculiar looseness of the skin, were abandoned, and the records of experiments on them were not taken into consideration.

A very superficial examination of these notes will reveal the fact that silk was at least as irritating as any of the materials used. The introduction of it beneath the skin was invariably followed by a distinct welt, which, except in rare instances, was accompanied by a discharge of pus more or less marked. In some cases this discharge was so severe as to drench the animal's back for days, while other materials which lay within an inch or two of the silk were creating little or no trouble. Next to the silk come the carbolized gut and peritoneum; reference to the notes will show that these were very nearly similar in the amount of irritation they produced, especially during the first few days, the symptoms of the gut usually ameliorating very greatly after the fourth or fifth day. This mending of symptoms in connection with the gut after some days was probably due to the fact that by that time whatever carbolic acid had been introduced became absorbed or was washed out by the discharge. The peculiar tendency of the peritoneum to produce inflammation is doubtless dependent upon something in the material itself, as every precaution was taken in procuring the membrane fresh from recently-killed cattle, and in preparing it for use. Unlike the carbolized gut, the peritoneum created disturbance as long as it remained in the wound. Next in order comes the plain gut. In the majority of instances the results were most favorable, very little inflammation being induced as a general thing by its presence, and when there was any it was always marked by a welt much smaller and a discharge much less profuse than usually existed in the case of any of the preceding materials. Occasionally there was nothing to indicate the presence of the seton but the two protruding ends,—not the slightest welt or a drop of pus. If the behavior of the plain gut was satisfactory, that of the tendon was eminently so. If the introduction of the plain gut was occasionally followed by no symptoms, that of the tendon was very rarely followed by any signs of inflammation. Indeed, in many cases the protruding ends appeared like large white hairs growing from the dogs' backs, so little disturbance did they create and so closely did the orifices of the track adhere to the seton. In Case VIII., the seton seemed actually to have contracted adhesions and to have become a part of the tissues in which it was buried. The same thing occurred in another case, not quoted.

As to the comparative absorbability, the relations are somewhat altered. In this respect reference to the notes will show that the plain gut stands at the head, then comes the carbolized gut, and after these the peritoneum and tendon. The average length of

time—computed from the experiments made, and six special ones—required for the absorption of a seton of the ordinary size, is, approximately, for the plain gut eleven days, for the tendon sixteen days. Of the experiments where knots of the different materials were placed beneath the skin, a few cases will now be given. These knots were all deposited without making any incision. The knot was made and attached to a loop of silk so arranged as to be easily withdrawn; a broad needle was then employed, by means of which the silk was passed under the skin, and the knot was then pulled into the desired position and the silk removed. By thus avoiding an incision directly over the position of the knots, a more correct estimate could be made of symptoms, the swelling, pus, etc., produced.

Case I.—Two triple knots, one of plain the other of carbolized gut, were introduced beneath the skin of a dog. In four days there was a swelling the size of a walnut over the position of the carbolized gut. When this was opened on the fifth day, the knot was discharged softened but not much reduced. The amount of pus was large. The plain gut produced a little swelling, which subsided, however, in about a week; on the seventieth day no trace of it could be found after careful search.

Case II.—Two knots as before. For the first two days there was considerable swelling on the part of both; the swelling over the plain gut had disappeared upon the fourth day, that over the carbolized gut at the end of a week. Both lay after this, creating no disturbance, for two weeks; when searched for at the end of this time they were found very much reduced in size.

Case III.—Triple knots of plain and carbolized gut, peritoneum, tendon, and silk, were placed an inch apart in a dog's back. At the end of the third day the silk, peritoneum, and carbolized gut were exciting considerable inflammation, the other two lying quiet; upon the fourth day the silk was discharged by a touch of the knife from a small abscess it had formed; the peritoneum and carbolized gut were found buried beneath the skin, with evident signs of pus; the plain gut and tendon were found lying inert, except that they were surrounded by a small quantity of lymph.

Case IV.—Two triple knots, one of plain silk, the other of silk saturated in a carbolic solution taken from a bottle of the imported gut ligatures. At the end of twenty-four hours the silk had created but slight disturbance, while the site of the carbolized silk was marked by great swelling and a high degree of inflammation, which culminated in a well-marked abscess on the fourth day, at which time there was only well-marked swelling over the plain silk. On cutting down upon the knots, the plain silk was found buried in a moderate amount of pus which equalled in amount about one-quarter of that in which floated the carbolized knot.

It will be seen that these results verify very strikingly those obtained from the setons,—the silk still presenting its irritating features, the carbolized gut and peritoneum standing next in this respect, the plain gut and tendon manifesting the fewest objectionable points. In addition, Case IV. demonstrates very clearly the irritation which carbolic acid will originate in the tissues.

In the next series the experiments were directed to the ligation of arteries. The ligatures employed were generally about the size of doubled silk; when silk was used it was doubled. The ends of the silk

were cut off close to the knot. The animals used were dogs.

Case I.—The femorals of a large dog were secured with carbolized gut ligatures. Two days after, there was considerable discharge, but only ordinary swelling, both of which subsided in about a week. The right side healed on the eleventh day, the left on the twelfth day. Search being made for the ligatures two weeks after, nothing could be found of them except a few shreds surrounding one of the arteries.

Case II.—Right femoral with carbolized gut, the left with silk. Both exhibited signs of inflammation in a marked degree; this subsided, however, in a week, and the wounds were both healed by the thirteenth day. At the end of the third week the silk was found to have severed the artery, and lay in a cyst that looked like a lymphatic gland. The gut could not be found; the artery was obliterated, though the external coat was not severed.

Case III.—Right femoral with carbolized gut, the left with silk. The wound on right side healed in ten days, that upon the left side requiring eleven days. On the fifteenth day the silk was found close to the surface and buried in pus. The vessel upon the right side was found severed, with nothing left of the ligature but the rounded knot. This was, apparently, causing very little inflammation.

Case IV.—The right femoral of a large dog with *uncarbolized* gut, the left with silk. The wound over the gut healed in seven days, that over the silk requiring eleven days. In three weeks the wounds were reopened. No trace of the gut could be found; the artery was obliterated, but the external coat intact. The silk was found imbedded in pus.

Case V.—The same experiment repeated. The results were very similar, excepting that at the end of two weeks the gut was found almost unchanged in size, though much softened.

Case VI.—In this case the wound over the gut healed in eight days, that over the silk in nine days. In neither case was there much swelling. At the end of four weeks the silk was found lying harmlessly upon the artery, which was severed. No trace of the gut; the artery had been severed.

Case VII.—A large dog. The right femoral with *carbolized* gut, the left with *uncarbolized* gut. The right side showed much swelling and discharge, and did not heal for twelve days. On the left side the swelling was by no means so great, nor the discharge so profuse. It healed in nine days. Upon opening at the end of two weeks, nothing could be found of either ligature but the knots, rounded and smooth, and apparently producing little inflammation, if any.

Case VIII.—Right femoral with tendon, left with silk. The right side healed in eight days, the left requiring twelve. At the end of two weeks the wounds were opened. The tendon ligature was found reduced to a pulp, lying between the cut ends of the artery, with no bad symptoms. The silk was found in a small abscess.

Case IX.—The two femorals of a medium-sized dog secured with tendon ligatures. Perfect healing took place in a week. On opening the wounds three weeks after, the arteries were found obliterated, with external coats intact. Nothing left of the ligatures but two shining knots the size of a pin's head.

Case X.—Secured the right femoral of medium-sized dog with silk, left femoral with tendon. Six days afterwards, the wound upon the left side was completely healed, and presented but moderate swelling, while that upon the right side was still open, much swollen, and discharging freely. On searching for the ligatures, the silk was not to be found, having probably been discharged, the vessel having been completely cut

through; the tendon was found much softened, but still surrounding the artery, which, though completely occluded, was not divided.

Case XI.—Ligated right femoral with silk, the left with tendon. For four days the left side wore an unhealthy aspect, while the right side looked well. At the end of a week there was no difference to be observed between the two sides. Both wounds were completely healed on the ninth day. On the tenth day a small lump was felt over the site of the silk ligature; this upon cutting down was found to be a large cyst, which when opened proved to contain the ligature, together with a quantity of pus. Search was made for the tendon ligature upon the thirteenth day; nothing was found of it; the vessel was reduced to a fibrous cord.

Case XII.—The two femorals of a medium-sized dog secured with tendon ligatures equal in size to *fourteen strands* of silk. Both wounds were healed perfectly upon the *tenth day*. The vessels at the end of two weeks were found obliterated; external coats not cut; on the arteries lay the knots of the ligatures, looking like pearls, so smooth and shining were they. They were reduced half in size.

Case XIII.—Right femoral of a large dog tied with a single strand of silk, the left femoral with a fine thread of tendon somewhat smaller than the silk. The wound over the tendon was healed perfectly on the sixth day, that over the silk upon the eighth day. At the end of twelve days the silk was found lying loosely between the severed ends of the artery, causing no trouble. No trace could be found of the tendon ligature upon the left side. The artery was obliterated, though the external coat was still intact. The arteries in this case were quite as large as the femorals in man.

The next material employed was peritoneum, with, however, unsatisfactory results. Three femorals were secured by ligatures of peritoneum, and none of the incisions did remarkably well: one was healed completely on the ninth day, the other two remained open, discharging freely, one for twelve days, the other for two weeks.

Great care has been taken in selecting the cases reported, especially with reference to the position of the vessel and the manner in which it was tied. Carotids and brachials have been excluded, owing to the great disturbance of tissues necessary in securing them; all femorals, also, have been excluded, when there was any bungling in their ligation. The cases quoted may be regarded, therefore, as presenting a fair record of the results obtained, inasmuch as the vessels are all of the same kind, and the operations for securing them very nearly equal in point of disorganization of tissue occasioned by them. Further, the ligatures being deposited so near the surface, their effects could be very readily studied. A review of the notes will show results which might have been anticipated from those obtained from the setons. The silk and peritoneum generally took the lead in the inflammatory symptoms engendered, the attendant swelling and discharge being usually great, and the time required for the healing process somewhat prolonged, when compared with that of the other materials. The carbolized gut comes next in order, but there was no marked difference between it and the preceding ones, there being usually about the same amount of trouble after a ligature of it was deposited; the time of healing, however, was a trifle less,—not quite a day, all cases in which it was used

being considered. After these follow the plain gut and tendon, between which and the foregoing there was a well-defined line of demarcation. The behaviour of the plain gut was very satisfactory, proving it to be readily capable of absorption and but slightly provocative of inflammation, in which respect, however, it was scarcely equal to the tendon, owing perhaps to the processes to which it is subjected in manufacture.* The tendon proved in a marked degree non-irritating; as, for example, in Case XII., where a large bulky ligature, double-knotted round a vessel about one-fifth its size, produced little or no trouble comparatively, and permitted perfect healing of the wound in ten days. The tendon, on the other hand, is by no means so absorbable as the gut.

Approximately, the time required for the complete healing of the wound computed from all the experiments was, for the silk and peritoneum, a little less than eleven days; for the carbolized gut, a little more than ten days; for the plain gut and tendon, between eight and nine days.

The three sets of experiments, taken together, show a result undeniably favorable to the plain gut and tendon.

Comparing the advantages of these two, we find the gut very non-irritating and rapidly absorbable, but making a ligature that scarcely grasps the vessel as firmly as silk, and with rather a bulky knot; on the other hand, the tendon is non-irritating to the last degree, not rapidly absorbable, capable if need be of being made up into threads of almost any degree of fineness, which grasp the vessel quite as well as silk, and at the same time make an excellent small knot. The extreme non-irritating properties of the tendon, coupled with its capacity for fine division, would render its slow absorption of decided advantage, since a vessel could be secured with a strand of it so fine as to produce no irritation, and yet there would sufficient time elapse before its disappearance to render any danger from secondary hemorrhage as remote as in the employment of silk, by which the vessel is usually severed in the course of a very few days. As to the ability of a fine strand to control even a large vessel, attention is called to Case XIII. Here a vessel as large as the femoral artery in man was secured with a ligature so fine as to pass readily through an ordinary cambric-needle. The result, as may be seen, was not in the least prejudicial. Thus it will be seen that the tendon ligature fulfils all the requirements set down at the beginning of this paper for a substitute for the material now in use. It is certainly not more irritating than silk, holds the vessel quite as well, and, in addition, is beyond all doubt ultimately absorbable, so that a ligature of it may be cut off close to the knot and left in the wound. These qualities would render it of great value in amputations. A fine ligature of this kind, applied to the many small vessels that spring after the operation, would certainly have some advantage over

the large strands of silk applied now to every vessel that bleeds, however small. At the worst, the ligatures would give no more trouble than the shreds of connective tissue and the like, more or less of which are always covered in by the flaps. In ligations in continuity, also, the tendon ligature would be of value, having all the advantages of silk and lacking many of its objectionable features.

TRANSLATIONS.

BUCCAL PSORIASIS.—Dr. Debove contributes to the *Archives Générales*, April, 1874, p. 433, a memoir on this affection, which is not by any means an uncommon one in Paris, though infrequent in this country. Dr. D. does not consider the disease identical with psoriasis as usually found upon the skin, though he retains the name, as more descriptive than that of ichthyosis given by English authors. The appearance of the disease is as follows. It presents itself at first in the form of isolated patches so small as to pass unnoticed. These gradually enlarge, however, and assume an opaline transparent appearance. The epidermic layer of the tongue grows thinner and allows the mucous layer to become apparent; gradually the patch becomes opaque. If these changed portions of the surface of the tongue are now examined with a lens, the papillæ are seen to be enlarged and frequently massed together with epithelial collections.

The usual form of the eruption is that of a V-shaped median patch, situated at the junction of the middle and anterior third of the dorsum linguæ: it may spread, however, over the whole upper surface, and occasionally to a less degree over the inferior parts. When the disease is well developed, the surface of the tongue feels hard and resistant, and occasionally this induration is so marked over certain circumscribed portions as to embarrass the diagnosis materially. A frequent concomitant or sequel to psoriasis in this locality is cancrroid.

As to the diagnosis, it is, M. Debove thinks, not difficult. Should the tongue have been irritated by applications, it may be mistaken for eczema. In this case, careful observation, without treatment, will show the characteristic patches taking once more the place of the artificially-created ulcerations. From indurated chancre the eruption is to be distinguished by the much less marked character of the induration, and by its not being accompanied by those glandular enlargements usually found in connection with lingual chancre. Mucous patches are decidedly different in their appearance from buccal psoriasis. Their surface is covered with the tenacious products of secretion, which, while they have a similar opaline appearance, yet when the secretion is scraped off look quite unlike the epithelial covering of the psoriatic patches.

As regards treatment, M. Debove directs total disuse of tobacco in any form, which he regards as having a certain influence towards the development of cancrroid upon the psoriasis. Besides this, he advises alkaline washes and the spray of alkaline mineral waters, as well as their internal use. A. V. H.

ANÆSTHESIA BY ELASTIC COMPRESSION.—M. Laborde reports in the *Progrès Médical*, May 30, the results of some experiments made by himself in the production of anæsthesia by Esmarch's bandage. The experiments were made by applying the bandage in the usual way on a dog's leg, when it was found that anæsthesia sufficient to permit of slight operations lasted for some two to three days.

* In making "catgut," the intestines of sheep are used. They are soaked for a considerable time in water, freed from fatty matter, etc., then treated with caustic potash, drawn through perforated iron plates, and subjected to the fumes of sulphur.

PHILADELPHIA MEDICAL TIMES.

A WEEKLY JOURNAL OF

MEDICAL AND SURGICAL SCIENCE.

The Philadelphia Medical Times is an independent journal, devoted to no ends or interests whatever but those common to all who cultivate the science of medicine. Its columns are open to all those who wish to express their views on any subject coming within its legitimate sphere.

We invite contributions, reports of cases, notes and queries, medical news, and whatever may tend to increase the value of our pages.

All communications must bear the name of the sender (whether the name is to be published or not), and should be addressed to Editor Philadelphia Medical Times, care of the Publishers.

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SATURDAY, AUGUST 8, 1874.

EDITORIAL.

THE AMERICAN MEDICAL ASSOCIATION.

SOME time since, we had occasion to call the attention of our readers to the curious agreement in sentiment and language between an editorial in the *Chicago Medical Examiner* and one which had appeared the week before in this journal. It will be remembered that no charge of plagiarism was made, although the literal identity of whole paragraphs was complete; and, as our Western confrère took no notice whatever of our second editorial, we concluded that he was not in the habit of reading the *Times*. We are happy to be able to inform our readers that he does now read the *Times*, albeit he writes in no friendly mood and seems sore about something, for in his editorial of July 15 is a long extract from one of our editorials,—this time in quotation-marks.

What if our Chicago brother does contrast his own "liberal and earnest mind, accustomed to work manfully, striving to make the world better," with the "Pecksniff" who wields the editorial pen of the *Times*? What if he does abuse the workman, since he praises the work? Soberly, he writes, "The *Times* is a most valuable journal." Strange, with Pecksniff at its head! We would not, however, have noticed the undignified and feeble personalities which the editor of the *Examiner* has indulged in had we not wanted to say a word about our last editorial upon the American Medical Association,—the alleged cause of his ire. We fear that we have been understood in some quarters as speak-

ing contemptuously of Western physicians, and, in the language of a correspondent, of "stirring up sectional feelings." Nothing, however, was further from our intention. We said, and still maintain, that at the late meeting of the Association only a portion of the profession was represented, and in stating the importance of that portion, it may be, we put our case too strongly. What we wanted to emphasize was—first, the great necessity of the Association being universal in its character; secondly, the fact that at the late meeting the whole profession was not represented. The West is an immense territory, many portions of it even now thickly settled, and all of it destined to be so. Human nature is of very like quality in all parts of our country, and we firmly believe that there are just as good men in the North as in the South, in the East as in the West, in the South as in the North, in the West as in the East. This fact, however, when taken in conjunction with the enormous territory over which the profession in this country is spread, makes it of the more importance that the meetings of the Association should be held in rotation, and that all other measures conducive to making the Association a common point of fusion, a general bond of union between the most widely separated districts, should be taken. In our opinion, this latter function is paramount in importance, and if the American Medical Association fails in this it fails in everything. If space were plentiful, in order to show the justness of our assertion in regard to the late meeting we could cite the names of twenty prominent Eastern medical men who were not there to where our Western brother cites one that was there; but our readers can do this for themselves.

CORRESPONDENCE.

TO THE EDITOR OF THE PHILADELPHIA MEDICAL TIMES:

SIR,—My attention has just been drawn to a review of my book on "Hay Fever," which appeared in your issue of the 15th of November, 1873. With your permission, I wish to be allowed to correct one or two statements made by your reviewer, and to make a few observations on the subject of your American autumnal catarrh.

Your reviewer, in speaking of my experiments, says I found "the intensity of the catarrhal symptoms to correspond closely with the amount of pollen found floating in the atmosphere, as demonstrated by the microscope, and that both reached their highest development in the vicinity of grass-fields during the time of hay-making." The former part of this statement is quite correct, but the latter does not express exactly

what I intended to say in my remarks on this part of the subject. As a matter of fact, hay fever does not depend upon hay-making. The disease generally reaches its highest point of intensity before hay-making begins in England, and declines rapidly as soon as this becomes general. The malady would show itself just the same if no grass were to be cut and made into hay, as it does now each season with this process going on. The development of the specific symptoms entirely depends upon the formation and distribution of pollen during the flowering period; and if this latter process is allowed to complete itself before the grass is cut, no hay fever will be produced by its being made into hay.

Your reviewer also represents me as holding the opinion that hay-fever patients often belong to a gouty family. I may, in an indirect manner, have conveyed this impression in my book, but I am not aware of having done so, and so far as I have been able to inquire into this matter I have not found that those who suffer from hay fever are more liable to gout than those who do not.

At the time my volume went to press I had not seen or heard of Dr. Wyman's book on "Autumnal Catarrh." I have, however, since then read it carefully, and have been much interested with the cases he has collected, and with the numerous facts he gives in connection with these; but, contrary to what your reviewer says would be the case, my reading it has not altered my views on the cause of hay fever, but has helped very much to strengthen the opinions I previously held. So far as I could gather from his book, Dr. Wyman had, when he wrote, no idea of the real nature of the cause of either hay fever or autumnal catarrh, and from a correspondence I had with him since he read my book (whilst over in England) I judge that he believes the cause of the latter disease to be "still a mystery." Our "June cold" or "summer catarrh" (hay fever) is undoubtedly due to the pollen of grass; and after a careful perusal of Dr. Wyman's book I am convinced that American autumnal catarrh and English hay fever are one and the same disease and due to the same cause, —namely, pollen; the one to the pollen of grass, and the other to the pollen of Indian corn, which latter, according to Dr. W.'s book, flowers just at the time your autumnal catarrh is most prevalent.

A few well-conducted experiments tried on the same plan as some of those described in my book would go far to settle this question; and if some of your physicians or laymen who are affected with this disorder will devote themselves to the work for a single season, I have very little doubt that the facts gathered in your own country will be found to support the conclusions I have arrived at by the experiments I have gone through in England. Hoping that some one will be found who is able and willing to devote himself to this inquiry,

I remain, sir,

Yours respectfully,

CHARLES HARRISON BLACKLEY, M.D., M.R.C.S.

STRATFORD ROAD, MANCHESTER, ENGLAND, July 15, 1874.

TO THE EDITOR OF THE PHILADELPHIA MEDICAL TIMES:

I OBSERVED in your issue of July 11, 1874, an article written by Dr. E. P. Bernardy, in which he claimed the honor of being the first American physician to recognize the value of the hydrate of chloral as a therapeutic agent in the treatment of puerperal eclampsia. In a recent number, July 25, I see that Dr. William B. Atkinson disputes the claim of Dr. Bernardy, and assumes that to himself (Dr. B.) belongs the credit. He claims that he used the remedy in question in a case of puerperal convulsions as early as October 26, 1871. I now propose to dispute the claim of my friend Dr. Atkinson, and endeavor to establish priority for Dr. Isaac S. Eshleman. I am thoroughly convinced that Dr. Eshleman was among the first, if indeed he was not the first, of our practitioners to use the new remedy. I know that at a meeting of the Northern Medical Society, in the winter of 1869-70, chloral was the topic of discussion. One after another spoke upon the subject: the great majority not having even granted it a trial, Dr. E. was the only person present who could say anything in its favor. He mentioned at that time that he had used it successfully in cerebro-spinal meningitis and tetanus, and said he believed it applicable to all forms of convulsions.

In order to show how early he had the audacity to use it, I am tempted to mention an incident. He was giving it in a case of convulsions, consequent, probably, upon chronic softening of the brain. In his absence, a brother-physician called to see the case, and horrified the family by saying that chloral was a remedy he had never used, and that all he knew about it was that "scientists had used it in experimenting upon cats and dogs."

On the first day of November, 1870, the doctor was called to see Mrs. S., residing on Wallace Street, who was laboring under puerperal convulsions of the most violent type. He gave her chloral in large doses, and the convulsions were soon under control. I should add that in this case he also resorted to venesection. You will bear me out in the statement, Mr. Editor, that this case occurred almost one year prior to the case mentioned by Dr. Atkinson.

Again, on the 10th of March, 1871, he was summoned at midnight to see Mrs. K., residing on Ridge Avenue. She had been all night in the hands of a homœopathic practitioner. The convulsions were frightful in the extreme. The doctor immediately ordered chloral, and tried to bleed her, but no blood flowed. The chloral was administered quite freely, and as soon as she came under its influence the convulsions ceased, and she made a very satisfactory recovery. She took about one hundred and twenty grains in twelve hours.

This second case was at least eight months prior to Dr. A.'s case. Since this time the doctor has used it with the best possible results in numerous cases of puerperal eclampsia, and has never failed to add his testimony to its efficacy in convulsions, no matter how caused. He has been particularly fortunate with it in the convulsions of quite young children. In cases of

cerebro-spinal meningitis and tetanus it has been almost invaluable.

Yours, etc.,

EMORY ESHLEMAN, M.D.

1333 GIRARD AVENUE.

PROCEEDINGS OF SOCIETIES.

PHILADELPHIA COUNTY MEDICAL SOCIETY.

A CONVERSATIONAL meeting was held April 8, 1874, at 8 o'clock P.M.

The PRESIDENT, DR. W. L. ATLEE, in the chair.

Dr. W. B. ATKINSON stated that he had recently delivered a child at full time whose left arm terminated about one and a half inches below the elbow. It did not present the appearance of having been amputated in utero; but there were two or three processes at the extremity, evidently rudimentary fingers. No cause could be assigned, save that the mother at the third month was frightened by lightning and grasped her left arm convulsively just below the elbow. Last spring, in one of his cases delivered during his absence, the child was hideously deformed, having but one nostril, the palate cleft from the nose completely through, and the eyes placed widely apart. In this instance the father was somewhat similarly deformed. This was her second child, the first one being also deformed, but not to so great an extent. He alluded to a case recently published, where the mother had marked her child with a toad on the back.

He could not offer any theory as to the cause of these deformities. If the sight of a deformity, etc., could produce it, then every woman in a certain part of this city ought to give birth to monsters, as there has lived for many years a man with the well-known fire-mark covering the whole face. This man is an object of great aversion to the females of that section, yet he (Dr. A.) had, although largely engaged in obstetrics in that section, never yet seen anything approaching it. He also alluded to an infant which, during the illness of an older child, had been neglected, where it was found that a worsted thread from its sock had become wound around the small toe, and had cut completely down to the bone. This was an illustration of the effect of elastic bands, as now proposed abroad for amputations, etc.

Dr. W. L. ATLEE stated that in his early professional life, while practising in the village of Mount Joy, Lancaster County, Pa., he attended a farmer's wife in confinement, who, immediately on the birth of the child, asked if it had a hare-lip. The child *had a hare-lip*; but the question having been evaded, she peremptorily repeated it, and said that she knew it was so deformed. She accounted for it by saying that in the early period of her pregnancy she had attended a public sale at a neighboring farm-house, where a number of people had assembled, and among them was a man with a hare-lip, who was continually obtruding himself upon her. His deformity made a deep impression upon her, and continually haunted her up to the period of parturition.

Soon after, a converse occurrence took place: a young married lady, three or four months pregnant, was much frightened by a fire which threatened to burn down her parents' house. In her distress, she bewailingly covered her face with her hands. The old women around her tore her hands from her face, and said, "You will mark your child." A strong impres-

sion was made upon her mind, and, as in the other instance, she could not divest herself of the idea that her child would have a "fire-mark" on its face. Such, however, was not the result.

In reference to the agency of the umbilical cord in producing deformities, and even death, of the fœtus, Dr. Atlee mentioned a singular case of suicide by a fœtus in utero.

A lady was taken in labor within a week of her full period of gestation, but had felt no motion for three weeks before. It was a foot-presentation, with the back of the child to the front of the mother. The child was dead and putrid, and the liquor amnii was of a dirty dark color. On investigating the cause of death, a very tight knot, which totally impeded the circulation, was found in the cord about nine inches from the body of the child.

Dr. F. J. BUCK mentioned a case at the *Free Excursions* last summer, where both legs of a child terminated below the knee-joint. The mother ascribed it to an impression made by the beggar on Chestnut Street, with whom all were familiar.

Dr. STUBBS mentioned the case of a woman who put her hand in a rag-bag during pregnancy, and a mouse ran up her arm. She was greatly startled at the time, and when her child was born there was shown a line resembling mouse-fur running up the arm.

Dr. A. NEBINGER then read a paper on "The Pathology of Cholera Infantum."

Dr. ATLEE remarked on the paper of the lecturer that there was a great difference between good arguments upon false data and those upon correct data. The reasoning of the lecturer was plausible, but in his opinion it was based upon erroneous premises. In most cases of cholera infantum, of choleroïd, diarrhœa, and dysentery, he believed that the affection of the liver was secondary, and that if the incipient stages of these diseases were properly treated, very little or no hepatic trouble would be manifested, and consequently no necessity of directing any special remedy to the liver. The portal circulatory system is so constituted that it takes its origin in the chylopoetic viscera and the alimentary canal, conveys the blood thence to the liver, and again ramifies throughout the structure of the latter organ. Consequently, any morbid action developed in the mucous membrane of the alimentary passages may more or less affect the condition of the blood in the vena porta; and as the current is from the intestines to the liver, the latter may suffer from the presence of this impure fluid. The primary irritation being in the *primæ viæ*, the secondary effects are manifested in the liver. Now, the first indication in all these derangements of the bowels is to get rid of the cause of the intestinal irritation; and if this be accomplished at the very earliest period, there will be very little danger of hepatic trouble. The safest and most successful plan, according to Dr. A.'s experience in the treatment of these and other intestinal diseases, is, immediately on their accession, to order, for an adult, a dose of castor-oil (fʒi) and laudanum (gtt. xv to xx), to remove the irritating contents as well as the mucous irritation, and, if need be, afterwards to give sulphate of soda (gr. viij) and opium (gr. ½) every two hours, with an additional dose every time the bowels are disturbed, and to continue this treatment until natural stools are induced. If this be done, in ninety-nine cases out of a hundred not a particle of medicine need be prescribed for the liver, as its action will be normal. If, however, the irritating ingesta be locked up in the bowels by astringents, cholera-mixtures, etc., the irritation will be aggravated and prolonged until the portal circulation will become poisoned, and the very results so well described by the lecturer will be developed, and his diagnosis confirmed

by post-mortem examination. The therapeutic success of such a plan of treatment illustrates infinitely better the pathology of these diseases than do any autopsical examinations, and at the same time saves the trouble of verifying our diagnosis by the latter means.

Dr. A. remarked that there were more potent causes than heat operating in large cities to originate and maintain cholera infantum. No doubt the high thermometric condition of the atmosphere had more or less influence; but when we go into our markets, and see the character of our milk and other articles of food by which our children are fed, we find a more efficient cause of intestinal disturbance. And when these sick children are sent into the country, it is not so much a diminution of temperature (which does not necessarily follow) as it is a change in the purity and freshness of their food that operates towards their recovery.

Dr. A. said that the poor liver had been charged with committing a great many sins. He thought it had been too much slandered. He had endeavored to explain his views in reference to the abnormal condition of the liver,—that it was merely a secondary affection, resulting from a neglected primary irritation in the intestinal canal. He would ask the lecturer to explain how heat operated to produce the condition of the liver so graphically described by him.

Dr. NEBINGER said that in his opening remarks upon the disease under consideration he took opportunity to observe that the pathology of cholera infantum was an open question. The remarks of those who had followed him in the discussion being adverse to the proposition put forth, that the liver is the starting-point of the disease, must be regarded as an indorsement of his declaration that the pathology of cholera infantum is yet an unsettled question. He said he was not surprised that his views had met with adverse strictures: indeed, it was precisely that which he had expected. He felt that to-night, as was his habit in the Society upon other occasions not very remote, his flint would strike the steel of his fellow-members, and from the blow heat and light would be evolved. He had not been disappointed.

Dr. Atlee in his remarks said that the first indication in cholera infantum is to get rid of the cause of the irritation of the intestinal tube, and if this be done at the very earliest period there will be very little danger of liver-trouble. This declaration of the doctor's is at best a little vague and unsatisfactory, and not reconcilable with the conditions which must have been met with in almost every, yea, he could add, in every instance of cholera infantum. The remarks of the doctor are, virtually, that if the bowels be promptly freed of their contents,—that is, of that which they contained at the time the attack of cholera infantum set up,—the freeing of the bowels would not only prevent the involvement of the liver, but would give health to the child. Certainly the doctor has forgotten that, in the vast majority of instances, when the physician has been summoned to treat cholera infantum, long before his arrival at the couch of the patient, without the action of any medicine, the bowels have been freely emptied, all irritating ingesta removed, and there is pouring out from the bowels but little if anything else than serum and mucus; yet, notwithstanding this, the morbid action of the bowels goes on, the frequency of the evacuations increasing, and the exhaustion of the patient hourly grows worse. If, as Dr. Atlee has said, the mere casting out of the contents of the bowels will prevent the liver-trouble, as in every case of cholera infantum the ingesta are fully removed in a few hours at most after the dawn of the attack,—indeed, in some cases where the result has been fatal, death has occurred in a few hours after the commencement of the attack,—in these the bowels have been entirely freed from ingesta, yet post-mortem examinations have revealed

congestion of the liver, and the gall-bladder empty or containing an abnormal bile. According to Dr. Atlee's views and statements, the emptying of the bowels should have prevented the hepatic trouble; yet the facts, not the fancies, are that the bowels were emptied, and promptly, too, but the emptying of them did not prevent hepatic trouble, as it should have done if the doctor's hypothesis is correct.

The doctrine of elimination of the contents of the bowels by evacuants, as being potent in the cure of bowel-affections, and especially of the use of castor-oil in repeated doses being a sovereign remedy for enteric diseases, and especially that Johnson, of London, has reported cases of cholera successfully treated by the use of castor-oil only, we are all, no doubt, quite familiar; but how many of us have confidence in Johnson's castor-oil treatment, and how many of us are ready to rely upon such treatment in cholera, is another matter. "I hesitate not," Dr. Nebinger said, "to speak for myself, and to say that I do not believe that a case of cholera was ever cured by the use of castor-oil or other evacuants, Johnson to the contrary notwithstanding."

In regard to all Dr. Atlee has said about the treatment of cholera infantum by locking up the irritating ingesta in the bowels by the use of astringents, cholera-mixtures, etc., Dr. Nebinger said that practically he did not know anything about such treatment, nor, with his views of the pathology of cholera infantum, could he ever know from practice anything about such treatment of the disease. The pathological views which he held in regard to cholera infantum, and which he had endeavored to present to the Society, suggested to him a rational treatment, which he pursued in the management of the disease, and with the results of which he was satisfied, and caused him, moreover, to regard as irrational such treatment as named by Dr. Atlee, and to conclude that when such treatment has been used with apparent success the *vis medicatrix nature* of the little patient has tided it safely over both the attack of the disease and the attack of the doctor.

Dr. Atlee says there are more potent causes than heat operating in large cities to originate and maintain cholera infantum. "Go," he remarks, "into our markets, and see the character of our milk and the other articles of food by which our children are fed. We find in them more efficient causes of intestinal disturbance than high thermometric condition of atmosphere." The doctor must not jump at conclusions: it is not safe to do so. It is true some babes are fed upon improper diet; but impure food will not account for the production of the disease in those—and such there are—who are not fed upon bad milk or an unwholesome diet of any kind: therefore, for these the doctor will have to find another cause for the production of cholera infantum in them than unwholesome diet. Dr. N. said he thought Dr. Atlee might find the cause to be the one he had suggested in his paper,—exalted atmospheric temperature, long continued. Dr. Atlee had asked him to explain how heat, or rather solar heat, produces congestion of the liver in cholera infantum. Dr. N. said he could not tell how solar heat congested the liver, but he presumed it did through the agency of the nerve-centres; but it does not follow because we cannot tell how a thing is done that it therefore is not done at all, as, for example, we know sunstroke is produced by solar heat; but because we cannot tell how it is produced, it does not follow that the sun or solar heat is not the agency by which sunstroke is produced.

Dr. N. said that he was in full sympathy with Dr. Atlee in the matter of the abuse which has been heaped upon the liver, and that he was aware that it had been charged with being the cause of bodily discomforts when it was innocent of all wrong; yet,

because it is occasionally charged with wrong-doing unjustly, we must not therefore conclude that it is never in fault. The spinal cord, the lungs, the heart, the spleen, the stomach, have all suffered from false accusations, and we must not neglect to say that the womb, above all other organs, has come in for an immensity of slander, and has not only been made the scapegoat of the wrong-doing of other organs, but it has, most unfortunately, been the shield of protection for ignorance and rapacity.

Dr. ESHLEMAN said he had no fixed idea of its pathology. He suspected that the primary lesion lay anterior to that of the alimentary canal and the abdominal viscera, *in the nerve-centres*. Remedies addressed to these, such as chloral, bromide of potassium, opium, and cool air, were no less essential in treatment than bismuth, aromatic syrup of galls, good milk, beef-juce, pepsin, brandy, and ice-water. So treated, he had not found the disease fatal.

PATHOLOGICAL SOCIETY OF PHILADELPHIA.

THURSDAY EVENING, JUNE 11, 1874.

THE PRESIDENT, DR. WM. PEPPER, in the chair.

DR. L. A. DUHRING presented a specimen of *angioma with sarcomatous degeneration*, and made the following remarks:

"The tumor which I present for examination possesses the following history: The patient was an Irishman, 50 years of age, with good general health, who stated that the growth began fifteen years ago. It first showed itself in the form of a small elevation or wart-like prominence. Its growth was very slow, especially for the first few years; of late it had evinced a disposition to more rapid development. At its commencement it was not painful, and caused him no inconvenience whatever; but since it had increased in size, within the last few years, it had been somewhat painful when squeezed or accidentally struck, and had been a source of 'worryment' to him.

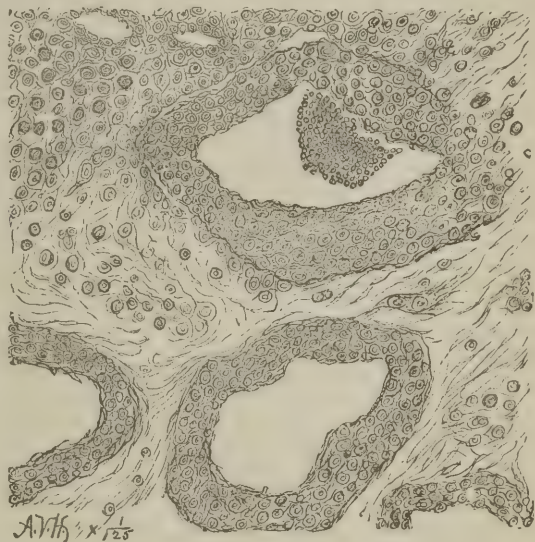
"Upon inspection there was found a somewhat pendulous tumor, the size of a large hazel-nut, pedunculated, and seated upon the tissues of the left arm, at about the insertion of the deltoid muscle. It was soft and spongy to the touch, but could not be manipulated without causing decided pain. After prolonged gentle pressure it became quite distorted, but immediately regained its former shape and general appearance upon the removal of the force. It was a flaccid tumor, hung loosely from its pedicle over the skin of the arm, and could be moved readily from side to side in all directions. In form it was roundish and somewhat oblong, and possessed a smooth though corrugated surface. In color it was, when in its normal condition, dark-reddish, with a purplish hue in its most dependent parts; when exposed to manipulation or pressure the color varied, and showed many shades of red and purple. The growth manifestly contained blood in large quantities, which could be made to accumulate or disperse, according to the manner in which it was handled. There was no sign of ulceration or breaking down anywhere upon its surface, its structure throughout appearing to be uniformly distributed. The growth bore the general features of an erectile or vascular tumor. There was no pulsation perceptible.

"Immediately after removal, which was accomplished by an elliptical incision about the pedicle, including a considerable portion of skin and subcutaneous tissue, the tumor became softer, although it still retained its general form. But little blood escaped during the operation, and the patient made a favorable recovery.

The tumor was cut open directly after excision, and showed a grayish surface with numerous reddish puncta disseminated in an irregular manner. The tissue was soft and spongy, although quite firm, and exhibited no appearance of disintegration. It possessed a reticulated structure.

"Upon pressure, a very small amount of yellowish fluid mixed with blood oozed out, but there was no pure blood to be seen.

"A piece of tissue taken from the centre of the tumor



was hardened in a weak solution of chromic acid and alcohol, and in the form of thin sections submitted to the microscope. With a low power an irregularly-formed tissue is seen, characterized by bands of structure of various size, shape, and distribution, which are present in all parts of the field, constituting a large part of the growth. These bands are made up of connective-tissue elements, and comprise the reticular work already referred to as seen with the naked eye. It is at once observed that much of this mesh-work consists of blood-vessels which have been cut in the section, some evenly and others obliquely, giving rise to a number of appearances, and which go to render the tissue so ununiform. These blood-vessels are present in all sizes, some still containing coagula of blood, while others are empty, their walls alone being seen as rings of connective tissue; some have collapsed, while others have retained their naturally distended form, giving a net-like look to the structure. These openings are larger and more developed in some parts of the field than in others.

"In addition to this mesh-work of vessels, there is another element in the growth, of almost equal importance and interest. In these bands and rings and throughout the whole tissue there exists an active and abundant cell-formation, which may be seen permeating all parts of the tumor, and which has a large share in the growth as seen at the present time. These cells are for the most part round or roundish, contain a large nucleus, and vary greatly as to uniformity of size. They are crowded together in places, and are very numerous everywhere in the field. They are imbedded or seated upon a light, delicate connective tissue, from which they appear to spring. They may be seen invading the walls of the blood-vessels, where they produce an altered and abnormal appearance, destroying their sharpness of outline and changing their usual conformation. In certain fields the cells may be

noticed collected together or arranged in strings, like so many spores of a fungus. The interest which concerns this little tumor rests with the results of the microscopic examination. Clinically, it was judged to be a simple vascular tumor or angioma, of the cavernous variety; the view of its being of a sarcomatous nature never having been entertained, and yet the microscope reveals this element in a marked degree. Viewed simply as a microscopic specimen, apart from its gross physical or clinical appearances, it might with almost equal justice be ranged either among the sarcomata proper or with the angiomata.

"In certain examples of sarcoma the vascularity is quite extensively developed, the veins especially being enlarged; but in most cases this condition does not exist, the vascular structure being of secondary importance. In the tumor under consideration the veins, arteries, and capillaries appear, however, to be too largely and conspicuously developed to be viewed in the light of a secondary formation. The walls of the vessels, which we have seen to be infiltrated with cells, also show the vascular elements to be of earlier date than the cells, which seem to be just beginning to invade these structures. From these facts, there can be no question but that in the case before us we have an angioma of the cavernous type, in which has developed, as a secondary formation, round-celled sarcoma."

Dr. R. M. BERTOLET agreed with Dr. Duhring in his idea as to the relation of the two conditions, the vascularity and the subsequent sarcomatous degeneration. As to the other view, which would make it a sarcoma originally, in which we have this development of huge blood-vessels later, he did not think it so reasonable. It is true that some of the cases of *fungus hæmatodes* are examples of extremely vascular sarcoma, but such tumors are generally much more rapid in their growth, and present other characters different from those of the angioma. The nævi or mother's-marks upon the skin are very liable to be developed into some form of angioma, which may remain innocuous for a long period, but if there is a rapid and multiple development of pigmented growths upon the skin, the probabilities are that we have to deal with melanotic sarcomata.

Dr. C. H. BURNETT presented *polypi from the ear*, with portions of a *necrosed incus*, and read the following history: "These polypi were removed from the left ear of a boy 7 years old, at present in the surgical ward of the Presbyterian Hospital, where he has been operated upon for lesion of the knee-joint. The patient is of a remarkably scrofulous diathesis, having at present a scrofulous ulcer on the neck beneath the affected ear. I found a copious sanious and offensive discharge issuing from the left meatus when my attention was called to this case by the surgeon then in charge of the ward. The parents state that the discharge has existed for two years.

"There has been mastoid disease on each side, to the greatest extent, however, on the left side, where I found a wide depression, with a corrugated surface, as large as the end of one's thumb.

"On the right mastoid process, close to the auricle, directly behind the meatus, there is a small, round, and deep depression in the bone, marking, in all probability, the exit of a former sinus.

"Upon inspection of the left meatus, I found a polypus as large as a pea lying half-way down the passage, attached to the antero-superior wall by a short, thick pedicle. I removed the polypus by means of Blake's-Wilde's snare, and touched the cut surface of the pedicle with a drop or two of chloro-acetic acid. Its removal was attended by a slight hemorrhage. After the removal of this polypus and the cessation of the bleeding, I discovered a longer, deep-red body, lying on the floor of the meatus, which at first sight I considered

a clot of blood, and, seizing it with a pair of forceps, I gently removed it. As soon as it was removed from the auditory meatus, I discovered that it was an organized body, containing in its structure a large amount of fluid blood, and imbedded in it I found the accompanying piece of bone, which is a portion of one of the ossicles. Dr. H. Allen has examined this bone for me, and has pronounced it the long process of the incus. I could find no necrosed surface in the ear from which this piece of bone could have come, which fact would remove any doubts as to its true nature. The organized vesicle-like body of polypus containing fluid blood was placed in a solution of equal parts of water and glycerin, which soon became deeply stained with blood, leaving the membranous sac quite pale and flaccid.

"The first polypus, placed in the same preservative fluid, has retained its original shape and brownish color.

"The fetid discharge has ceased, in three weeks since the operation, under the use of daily syringing with Labarraque's solution and water (f3ss—Oj). The amount of hearing in this case could not be obtained, because the child belongs to that class, now and then seen in hospitals, which makes no reply to its superiors, but converses freely with its playmates, apparently hearing all that is said. There can be no doubt that the boy is deaf in the left ear, for inspection since the cessation of the discharge reveals the entire loss of the membrana tympani and all those portions of the ossicula auditus usually seen from the meatus. What the condition of the bodies of the ossicles may be, it is impossible to state. I believe the portion of the incus removed with the second polypoid growth became detached by a process of necrosis, but was mechanically retained in the meatus by the first polypus, which entirely occluded the meatus. The second growth, to which the long process of the incus adhered, was in all probability a polypus in the process of formation."

THE PRESIDENT mentioned a *morbid discharge* which he had met in the morning for the first time. It is the condition known by the French writers as *albuminoid expectoration*, which presents itself sometimes after paracæstesis of the chest. He had, in connection with Dr. Thos. J. Yarrow, drawn off from the chest of a patient with hydrothorax, probably connected with tuberculous disease of the pleura, seventy-five ounces of serum. The operation was easily performed with the aspirator, and gave the patient great relief; but towards the end of the operation there was grating of the roughened pleura against the canula, which caused him to desist. There also occurred, subsequently, some troublesome cough, which was, however, relieved by deodorized tincture of opium. The fluid drawn off promptly coagulated, the latter portion becoming semisolid, like soft jelly.

In about eighteen hours after the operation he began to expectorate very freely a peculiar matter, consisting of an abundant muco-fibrinous coagulum floating in a straw-colored serum, the amount raised in twenty-four hours being at least three gills. It resembled so closely the fluid drawn off from the chest as to attract the notice of the family. This peculiar expectoration corresponds with what has been described, especially by the French physicians. The amount which is reported to have been expectorated in some cases much exceeds what occurred here. Various explanations have been offered for this phenomenon, but no one seems to have entirely established itself. Some have attributed it to laceration of the lung and the escape of some of the pleural effusion through the bronchi, but such did not occur in this instance, since there was no hæmoptysis, pneumothorax, or other evidence of puncture of the lung-tissue.

It has also been suggested that this expectoration depends upon a rapid collateral œdema or transudation

into the bronchi, which occurs while the lung is expanding and returning to its original state; and this appears the most probable view of the matter.

The patient had a dangerous syncopal attack six or seven hours after the operation, from which he was, however, aroused by stimulants.

Dr. J. EWING MEARS asked the President whether the formation of the coagulum in the fluid drawn off would not imply to a certain extent the existence of inflammation. He had observed that wherever this had occurred in fluids derived from tapping the abdomen, there had been inflammatory action. He had never observed it in pure *hydro-peritoneum*, in which the fluid is a true transudation and resembles more or less closely the serum of the blood.

THE PRESIDENT replied that while he thought that the presence of a large amount of this coagulum favored the view of inflammatory action of a certain grade, he had also observed it to take place more or less in all effusions. In effusions attending cirrhosis of the liver, where, although the peritoneum was altered, there had been no inflammation, he had frequently seen after ten or twelve hours flocculi of this substance. He had seen it also in the fluid of non-inflammatory hydrocele and in pleural effusions attending heart-disease. Where, however, as already stated, the amount of this coagulum is large, he considered it to a certain extent evidence of inflammatory action.

Dr. MEARS said he had asked the question more particularly in relation to the character as possessed by the expectoration.

Dr. BERTOLET said that it was readily conceivable that we might have this expectoration without any previous inflammation, if we considered the analogous process where, in consequence of occlusion of a smaller bronchus, either by the entrance of a foreign body or by plugging with inspissated secretions, there is brought about a collapse of the lung-tissue supplied by the obstructed bronchiole. The wedge-shaped portions of the lung in which there has been thus acquired atelectasis soon become hyperæmic, followed by an exudation of serum and blood. This subsequent œdema or splenization does not imply an inflammatory condition, but results from mechanical causes, such as stasis and the removal of the internal pressure of the atmosphere. In the operation for paracentesis, the external pressure is removed from the more or less completely collapsed lung, and again the conditions are favorable for the transudation of the liquid and solid constituents of the blood into the air-vesicles; but here, since there is no obstruction of the bronchioles, it is readily expectorated.

Dr. B. suggested the use of Donnie's liq. potassa test for pus, in another instance, with a view of determining more precisely the condition of the expectorated matter.

voted to the field of toxicology—needs all the light that the most powerful lenses of thought and intellect can concentrate upon it. Human life may hang upon the faintest diversity of hue in a chemical reaction, and justice be made more hopelessly blind by the dust thrown into her eyes by the pretentious and ignorant of both professions. It is fearful to think of the risks of life to which the innocent have been subjected, and of the insufficiency of scientific testimony which has afforded loopholes for the escape of the guilty, as we reflect upon the great criminal trials of the past. Doubtless, a single fallacious test, a color that told a false and fleeting story, a symptom whose very intensity was an unreliable diagnostic sign, were sufficient, in numerous instances, to acquit the guilty or condemn the innocent. In these days, however, each new case of medico-legal interest seems to develop the necessity of thoroughness in the appreciation of every detail of test and symptom, and of a completely exhaustive analysis, which should be followed by testimony in the witness-box the accuracy of which should be unquestioned and unquestionable. As Prof. Reese justly remarks, the great leading idea that ought to govern the toxicologist in all his chemical investigations is, not to see with how small a number of tests he can prove the presence of the poison sought for, but rather how many different tests he can adduce to prove his point. The author states, however, that a veteran chemist has rather boastfully asserted on the witness stand that, in making an analysis for poison in a capital case, if he had satisfied himself of its presence by one or two tests, any further experiments were quite unnecessary.

A poison is well defined by Prof. Reese as "a substance capable of producing noxious and even fatal effects upon the system, no matter by what avenue it be introduced; and this, as an ordinary result, in a healthy state of the body, and not by a mechanical action." The question of *quantity* is sensibly left out, for "the mere quantity of the substance required to destroy life cannot be made a ground of distinction between a poisonous and a (so-called) non-poisonous article."

The number of poisonous substances detected in the blood, the secretions, and the tissues and organs of the body, has wonderfully increased since the days of Orfila, whose published account limited them to comparative numerical insignificance when contrasted with those detected by more recent investigators. The effects of various physiological conditions are ably discussed in a chapter on the "Mode of Action of Poisons on the Animal Economy," the author stating that "there is good reason to believe that the poison is active only while circulating in the capillary blood-vessels. It is a very common mistake to suppose that death is caused by the very poison discovered in the stomach; the death being, in point of fact, attributable to the absorbed portion only (except in the case of the corrosives). The quantity remaining in the stomach after death is the surplus of what was necessary to kill."

A chapter of especial interest to the defendant in a medico-legal case and his counsel includes an inquiry into the possibility of imbibition of poisons after death. "Is it possible," says the author, "for a dead body to imbibe a poisonous substance from the soil in which it has been interred? Is it possible that a poison introduced into the stomach or the rectum, or by the hypodermic method, after death, should pass through the tissues by imbibition into other viscera of the body, so as to give rise to the suspicion of poisoning, when, in reality, the death had resulted from a different cause?" In regard to the first branch of the proposition,—cemetery-poisoning,—arsenic being the only substance in dispute,—Prof. Reese considers that it is impossible, from the insolubility of that substance and the absence of direct chemical action, that it should be capable of

REVIEWS AND BOOK NOTICES.

A MANUAL OF TOXICOLOGY, including the Consideration of the Nature, Properties, Effects, and Means of Detection of Poisons; more especially in their Medico-Legal Relations. By JOHN J. REESE, M.D., Professor of Medical Jurisprudence and Toxicology in the University of Pennsylvania, etc. 8vo, pp. 507. Philadelphia, J. B. Lippincott & Co., 1874.

As the result of the labors of a skilful, earnest, and enthusiastic practitioner and teacher, who has devoted some of his best efforts to the unravelling of medico-legal intricacies, this new and original work creates for itself an elevated position among the standard books of its special department. The particular branch of medical jurisprudence which it investigates—that de-

such transudation. "If the poison was deposited in the organs during life by absorption, the viscera will contain as much of the poison in their interior as on their surface, which would not be the case if they had derived it by post-mortem imbibition. But if the poison is found in the organs of a body after many years' interment, then the objection may be very plausibly urged that its presence in the different viscera may be ascribed to imbibition from the stomach and bowels."

The practitioner must endeavor to cultivate an accurate knowledge of the evidences of poisoning as derived from symptoms, post-mortem examination, chemical analysis, etc. It would be improper, as a general rule, to convict on any one link in the chain, unless some other corroborative link were added. Certainly, so far as symptoms are concerned, the view of Orfila that a case of poisoning can never be proved by them alone is the correct one, inasmuch as there are no characteristic symptoms of any single poison. If it were possible to decide on symptoms alone, as the author remarks, there would be no necessity for a chemical analysis. Although it is possible to establish the fact of poisoning without any chemical analysis, the public at large is not satisfied that justice has been done to or for the prisoner until the refinements of chemical manipulation have been brought to bear upon all matters at issue admitting of such an application. The author contends that the experimenter should never be satisfied with the results obtained from a single test or from a single line of testing. "Thus, in testing for prussic acid, the analyst is not justified in stating, as was done in the Schoeppe case, that this poison was present, simply because 'faint traces' were observed by the application of only two out of the four recognized tests for this substance, and one of these (the iron test) very doubtful."

He states that, in all cases of poisoning by the metallic compounds (arsenic, antimony, mercury, etc.), it is essential to obtain the *metal*, and in such quantity as to enable it to be subjected to all the corroborative tests.

Important as color-tests are, they are frequently fallacious, and the author gives several excellent reasons for the avoidance of a merely mechanical reliance on color alone. Honorable participation in recent medico-legal cases has given Prof. Reese much food for reflection on this point.

"Even the well-known and characteristic color-test of strychnia, which is not imitated by any other known substance, should not be exclusively relied upon in a criminal case, but ought to be corroborated by other tests."

A chapter is devoted to "Compound Poisoning" and the "Antagonism of Poisons," the former having excited popular interest recently from the effort to prove in the Schoeppe case that prussic acid and morphia had both been administered. In regard to the antagonistic action of poisons, as prussic acid and morphia, it is difficult to draw any absolutely conclusive inferences from experiments on the lower animals, in which the toleration for certain agents is sometimes even greater than in man.

Of late years the public has been naturally perplexed in the employment of the expressions *expert* and *expert testimony*. Unfortunately, as usually presented in criminal cases, medico-legal questions become so frequently the texts for quibbling and contention, that in the confusion of discordant testimony they elicit but little sympathy for either of the learned professions interested. An expert should be uniformly "a skilled witness; one who has accurate knowledge of the matter under consideration;" but it must be rather mortifying to one really deserving of such an appellation to find the term bestowed on all those whom the lawyers on either side may so designate, and semi-scientific tes-

timony quoted and discussed as if it had the weight of authority. The whole system does injustice to superior intelligence and culture, when brought in public collision with mediocrity in the court-room.

"If it were only possible," as the author remarks, "to exclude these improvised experts from poison-trials, and confide the responsibility to men of known and recognized toxicological ability, there would occur far fewer occasions in which this conflict of expert-testimony would be witnessed; for it is to be observed that among *genuine* experts—persons of purely scientific attainments, uninfluenced by either prejudice or favor, not mere partisans—this difference of opinion on a purely professional subject is much less likely to occur. In Germany, the experts first summoned are exclusively those whom the State, after proper examination of their competency and skill in such particular inquiries, has duly authorized to act for this purpose; while in addition to this, there is organized a tribunal of experts, to which the opinions of expert witnesses can be referred." We heartily agree with the author that adequate compensation should be given to expert witnesses, commensurate with the high duties they have to perform and the great importance of their testimony.

The greater portion of the work is devoted to poisons proper, their actions, antidotes, tests, etc., embracing all the light which modern investigation has thrown upon the methods of analysis and detection. The classification adopted is modified from that of Taylor.

We cannot do otherwise than commend the writer of this excellent volume for the good taste he has displayed in avoiding personal allusions, such as might very readily have been anticipated from one whose recent testimony in several important criminal cases had brought him into controversy with men of opposite and inflexible views. By thus keeping his work within strictly scientific limits, much more importance is given to the results of his labors. The book, resting on its own merits, on the reputation of its author, and on the importance of its subject, will, we trust, take a well-deserved place as a standard authority on toxicology. In conclusion, we may add that the volume is issued in a handsome and attractive style of typographical execution.

OFFICIAL LIST

OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U. S. ARMY, FROM JULY 28 TO AUGUST 3, 1874, INCLUSIVE.

- BROWN, JOS. R., SURGEON.—Relieved from duty as Medical Director of this Department, having been appointed President of the Army Medical Examining Board, to meet in New York City on August 4, 1874. G. O. 7, Department of the Platte, July 23, 1874.
- PAGE, CHARLES, SURGEON.—To act as Medical Director of this Department until the arrival of the medical officer ordered to that duty. G. O. 7, c. s., Department of the Platte.
- RANDOLPH, JOHN F., SURGEON.—Granted leave of absence for thirty days. S. O. 104, Department of the Platte, July 29, 1874.
- WRIGHT, J. P., SURGEON.—Assigned to duty at Fort Hays, Kansas. S. O. 117, Department of the Missouri, July 30, 1874.
- GRAY, C. C., SURGEON.—When relieved by Assistant-Surgeon Middleton, to proceed to Fort Duncan, Texas, for duty at that Post. S. O. 116, Department of Texas, July 28, 1874.
- JANEWAY, J. H., ASSISTANT-SURGEON.—When relieved by Surgeon Wright, to proceed to Fort Wallace, Kansas, for duty at that Post. S. O. 117, c. s., Department of the Missouri.
- WATERS, W. E., ASSISTANT-SURGEON.—To proceed, without delay, to Fort Dodge, Kansas, and report in person to Colonel N. A. Miles, 5th Infantry, for duty. S. O. 116, Department of the Missouri, July 29, 1874.
- MIDDLETON, P., ASSISTANT-SURGEON.—Assigned to duty at Fort Clark, Texas. S. O. 116, c. s., Department of Texas.
- KING, J. H. T., ASSISTANT-SURGEON.—Granted leave of absence for ten days. S. O. 149, Military Division of the Atlantic, August 1, 1874.

SATURDAY, AUGUST 15, 1874.

ORIGINAL COMMUNICATIONS.

PAROTITIS, TRANSLATION TO TESTIS AND BRAIN, WITH THREATENED ACUTE MANIA—RECOVERY.

BY S. J. RADCLIFFE, M.D.,

Washington, D.C.

G. W. D., 17 years old, of good physique, fair complexion, auburn hair, and heretofore in good health, with no known hereditary tendency to disease, called at my office August 16 last, complaining of sore throat. I examined his throat, and found the tonsils and pillars of the fauces slightly inflamed and swollen, but no fever or other constitutional disturbance. The next morning I found his tonsils and fauces still inflamed and swollen, some difficulty and pain in swallowing, jaws a little stiff and slightly swollen about the angles and below the ears, pulse accelerated, bowels slightly constipated, face flushed, and altogether feeling rather badly. He was ordered a diaphoretic, and warm flannel applied to the face and neck.

18th.—Very little change, except more swelling and pain at the seat of the parotid gland, and general malaise. Treatment continued the same.

19th.—Symptoms somewhat increased in intensity; more fever, temperature higher, pulse fuller and stronger—96 beats to the minute, jaws more stiff, throat quite sore, considerable difficulty in opening the mouth, tongue coated white, right testicle slightly swollen and painful on motion or to the touch, and less swelling on the right side of the face than on the left; bowels sufficiently open.

20th.—Fever increased, pulse 110, temperature 101.5°, face much swollen, swelling and pain of right testicle greatly increased; very restless; but little sleep during the night, with some delirium. Continued the diaphoretic, with warm flannel to the testicle and camphorated liniment to the right side of the face.

21st.—Fever high, pulse 120, and bounding; skin hot and dry, temperature 102.6°, tongue heavily furred, mouth dry and clammy, bowels constipated; no sleep, and quite delirious most of the night; constant nausea, with efforts at vomiting; testicle enormously enlarged, and extremely painful on the slightest motion. No priapism observed. Solution of citrate of magnesium was ordered, and to be repeated until free catharsis was produced. Diaphoretic continued; flaxseed-meal poultices to envelop the entire throat and sides of the jaws from ear to ear; warm flannel applied to the testicle, which was suspended by a roller of flannel; and lumps of ice to quench thirst allowed as desired.

22d, 11 A.M.—Perspired profusely during the night; clothes drenched; fever gone; temperature 99°, pulse 85, and soft; skin moist; bowels moved two or three times freely; quite comfortable; jaws and testicle still much swollen, but not so painful; tongue looks better; can swallow better.

5 P.M.—Expressed himself as feeling quite comfortable, and was doing well. There was every indication now that the disease had spent its force, that it would terminate favorably as usual, and that nothing more was to be feared.

23d, 11 A.M.—Still doing well, and convalescence seemed about to be established, except that he was rather restless and did not sleep soundly or continuously during the night, but was wakeful and fretful, complaining of little things that annoyed him; would ring for the servants at unusual times, and be very im-

patient until they obeyed his summons. His tongue continued pasty; still some desire for ice. Swelling of the face and testis decreased.

5 P.M.—No material change.

24th, 11 A.M.—Some symptoms of cerebral excitement developed during the past twelve hours. Sleeplessness; continued restlessness; exceedingly irritable on the slightest provocation; rapid and continued talking, which was very exhausting to him, and mostly upon one subject. He considered himself well, and strenuously resisted restraint. He had no desire for food; gulped down everything given him simply to get rid of it, or to please those giving it. Could not be induced to remain in bed; constant desire to get up and dress. Pulse 110, sharp and unsteady; eyes bright and staring, pupils contracted, tongue pasty, mouth clammy, surface cool, looked worn. Swelling of face and testicle subsiding. These symptoms continued for some days, without much change. We tried to treat the matter as if his peculiarities were simply the result of the usual and natural peevishness due to sickness and the debility following. We therefore disregarded them to a great extent, and only watched him, taking care not to cross him, but to satisfy his whims as far as possible, and wait results. I directed fifteen grains of bromide of potassium to be given him every two hours, with a drachm of elixir of valerianate of ammonium added, and enjoined decided rest and quiet.

27th, 11 A.M.—On calling as usual, his mother informed me in great alarm that George, in his weak and feeble condition, had slightly dressed, and left the house without the knowledge of any one; had gained access to the stable in a clandestine manner by climbing in the window, the door being locked; had saddled and bridled the most fractious of the horses, and ridden off they knew not whither. His father found him, after a wide search, in an exhausted condition on the street, about 2½ P.M., and sent him home in a street-car under the protection of a friend. At 5 P.M. I found him wild with excitement, with great cerebral disturbance, talking rapidly and warmly, but with some coherency, principally upon one subject, repeating it over and over again, as if his previous remarks had not been impressed upon his hearers, and occasionally with a smile and with seeming enjoyment; dwelling, also, largely upon his exploits during the day, with a desire to justify or to explain the cause of them. His pulse was 120, weak and tremulous; skin cool, head hot; a flush like that of hectic on his cheeks; cheeks hollow, eyes staring, pupils contracted, mouth clammy, requiring frequent sips of water to enable him to talk; restless, not easily restrained; not easily turned from his train of thought; swelling of the jaws nearly disappeared; swelling of the testis nearly gone. The bromide of potassium was increased to thirty grains every two hours, without the elixir of valerianate of ammonium, until sleep or quiet was produced; to be kept perfectly quiet, and his talk not encouraged.

28th, 11 A.M.—Met Dr. Basil Norris, U.S.A., in consultation, but we learned at our visit that after a rather restless night our patient had fallen asleep at 6½ A.M., and was still asleep, and we deemed it advisable not to awake him. At 3 o'clock P.M. he was still asleep and quiet.

29th, 11 A.M.—We were informed that our patient had slept until 6 P.M. the evening before, and most of the past night. We found him sitting with a young friend at a writing-table, laboring under great mental excitement about some letters he desired to write to friends, so he might get his mind clear of all such things, or "get them off his mind," as he would say. His friend sat perfectly resigned and under his control, and wrote whatever he dictated. He had a number before him ready

for the mail, and was still dictating more. His principal theme was his studies and his return to school at Exeter immediately, and he was constantly making his plans for the purpose. Another subject that seemed to irritate him was that he thought his father, who had obtained an appointment for him, desired him to go to the United States Naval Academy at Annapolis; he did not wish to go, and when his father dissipated that idea from his mind he seemed very much elated. He complained a good deal of headache, of weariness, of being easily fatigued, and seemed to appreciate the fact that his mental faculties were not under control. His pulse continued rapid, the surface cool, the head hot, and the mouth and tongue pasty. We directed the bromide to be continued, and our patient to be kept in his room and watched.

30th.—Slept most of the past night; somewhat refreshed, but still talks; still writing letters with the aid of his friend; still restless and irritable. He had no desire for food, but drank or sipped ice-water frequently. He would take a little fruit now and then, which he seemed to enjoy. He promised me he would write no more letters for a week, and put up his materials.

31st.—Little quieter; slept but little past night; still considerable disturbance of the functions of the brain; general condition about the same. He desires to go out, and can scarcely be restrained from doing so.

2½ P.M.—Had a consultation with Dr. C. H. Nichols, of the Asylum St. Elizabeth, D.C., in regard to the patient. We found him without amendment, and the diagnosis was fully confirmed that he was laboring under a high state of meningeal excitement or hyperæmia, influencing the brain to increased functional activity, due to translation or operation of the materies morbi of the mumps; and he was considered threatened and to be in great danger of acute mania. The bromide of potassium was directed to be continued, with hot sitz-baths, made stimulating by mustard, and cooling and evaporating applications to the head frequently through the day; not to be allowed to go out; not to be exposed to any bright light, but kept generally in a moderately dark room.

Sept. 3.—He continued with very little change to this date. His pulse varied from 100 to 110; temperature about normal, though to the touch the surface was cool, while he complained of cold feet and hot head. A hot brick had to be put to his feet frequently at night. His tongue continued pasty, with some thirst, and anorexia was almost complete.

4th.—Pulse 90, tongue disposed to clean, mouth moister, not so thirsty, the general circulation better, not quite so irritable, sleeps a little better. Treatment continued, though less frequently.

5th.—Still improving; pulse 78, tongue cleaning, eats better.

8th.—Out walking during the morning. Went to church yesterday. Seemed much better; was quiet and composed, and much less inclined to talk.

18th.—A decided change had taken place for the better. Had much improved in general health. The functions of the different organs were more regular, and normal; though he was still somewhat impatient and irritable.

20th.—His father called to see me, and said George had some return of excitement the day before. He had taken a ride on horseback with a lady, which had upset him. He said he was very restless during the night; imagined he saw objects entering the room; was quite timid, requiring him to remain with him all night; and he feared a return of the trouble. I directed him to give him the bromide again, which had been suspended for a day or two, and to keep him from any sources of excitement.

Oct. 1.—Had made frequent inquiries about the patient, and learned that he was daily improving in general health, daily becoming "more like himself," and had greatly improved in mental acumen, without any return of the aberration from which he had suffered.

22d.—Called, but found the patient out. His mother informed me his father desired, as he had so much improved, he should be engaged in some light occupation to amuse him as well as instruct him, and, though he did not wish him to take up a regular course of studies thought the study of anatomy would be a pleasing pastime for him during the winter, which would afterwards probably lead to something more extensive. Consequently, on the 24th of October he matriculated at one of our medical colleges, and attended the course on anatomy.

June 20, 1874.—Received an appointment in the U.S. Coast Survey, and is now, July 16, on the Lakes in that capacity. His health, mental and physical, seems entirely re-established.

I have been induced to record this case of parotitis, because of the rarity of the sequelæ. I have been able to find but few cases of parotitis with brain-complications even hinted at, and the literature of the subject is so decidedly meagre that most of the authors who speak of it at all do so only as a probable result. Whatever may be the cause of the limited extent of the writings on this branch of the practice, whether from want of observation or otherwise, it is nevertheless true that, whenever this lesion is even mentioned, it is said to be of very unusual or rare occurrence; and its pathology is even now really a matter of conjecture or doubt.

Chelius, "System of Surgery," by South, vol. i. 1847, p. 167, gives the following as the literature of inflammation of the parotid, viz.:

Laghi, T., *Historia Epidemicæ Constitutionis, in quâ Parotides seroso glutine tumentes redduntur quæ Anno 1753 Bononiæ contigit in Comment.* Bonn, vol. v. p. 1.

Hamilton, R., *Account of Distemper by the Common People in England vulgarly called the Mumps, in Trans. of Royal Soc. of Edinburgh*, vol. ii. p. 59, 1790.

Hoff, *Diss. de Anginæ Parotidiæ.* Goetting., 1799.

Breurecke, *Diss. Anginæ Parotidiæ Descriptio pathologico-therapeutico.* Helmst., 1804.

Burns, Allen, *Observations on the Surgical Anatomy of the Head and Neck.* Edinburgh, 1811, octavo.

Good, Mason, M.D., *Study of Medicine.* Lond., 2d edition, 1825, vol. vii.

Since that period nothing has been written worthy to be distinguished as a monograph, though a very few isolated cases may be found in the journals, having reference more to the orchitis and other complications, as ovarian, uterine, or leucorrhœal, than to the brain. I have run over the journals for the past half-century, and am surprised to find so little bearing on this particular point. Our standard works and text-books are our only guides in the matter.

In the Catalogue of the Library of the Surgeon-General's Office, U.S.A., with an Alphabetical Index of Subjects, edition of 1872, there is nothing on parotitis as a distinct subject. In the edition for

1873 there is, I believe, but one in the English language, and but a few in the French language, and these are only theses for the doctorate. The following are those relating to metastasis, principally to the testes, and those of a sympathetic nature, and mostly connected with a typhoid state, viz.:

Rodburg, 1727; J. Joseph, 1792; Callenfels, 1815; Lortet, 1819; Delissalde, 1822; Rahwande, 1831; Brillat-Savarin, 1854; and Debize, 1869. The latter I have looked over,—viz.: Thèse pour le Doctorat en Médecine, de l'Etat Typhoid dans les Oreillons. Par François Debize, Paris, 1869,—and find that it makes no mention *per se* of metastasis to the brain. His principal proposition may be summed up in the following: "Nous considérerons les oreillons comme une maladie générale qui frappe le testicule au même titre que la parotide; la localisation de la maladie se fait, il est vrai, le plus souvent sur la région parotidienne, mais les autres déterminations morbides se faisaient sous l'influence de la cause générale sur des tissus ayant une composition et des fonctions analogues." This thesis refers to the other writers, but nothing further is elicited bearing on the point at issue.

Dr. Harvey Lindsley, of this city, reports, in the *Stethoscope and Virginia Medical Gazette*, vol. i., 1851, pp. 15 and 16, two cases of mumps with metastasis to the brain, both terminating fatally. He says, "Cases of mumps with determination to the brain are so exceedingly rare that I do not recollect to have seen or read of more than three besides those referred to at the head of this article. Most of our popular writers on the practice of medicine, though men of extensive experience, have evidently never seen a case, while they still speak of it as of occasional occurrence. This is the fact with Good, Eberly, Dewees, McIntire, Wood, Watson, Tweedie, etc., and indeed the only author who speaks of this complaint as having come under his own observation is Dr. Dickson, of Charleston, in his able and interesting work published a few years since." These were doubtless cases of real cerebritis, as post-mortem examination of the second case revealed extensive cerebral congestion. They died within four days of attack.

From the leading works on the practice of medicine, I find only the following, briefly summarized:

Austin Flint (Practice of Medicine, 2d ed., 1867, p. 370) says, "The parotid gland appears to be the seat of the disease, but it evidently involves a constitutional morbid condition, and a special causation. . . . Occasionally during the progress of the disease, or when the affection of the parotid is about to disappear, swelling, pain, and soreness of one or both of the testes occur. This must be extremely rare. I have met with but a single example. In the female, it is stated, the mammary gland and the labia majora are liable to become affected. I have never met with an example. When parts other than the parotid are involved, it is not from a metastasis, but from the operation of the same internal morbid condition which occasions the parotitis. . . . The disease, except that it occasions discomfort, is always trivial. The popular apprehension of danger from 'taking cold'

in this disease is based on the idea that if the affection of the parotid be arrested a metastasis is apt to take place. There is little ground for this idea. . . . The prognosis is always favorable."

In Reynolds's System of Medicine, vol. i., Lond., 1866, p. 229, Dr. Sydney Ringer, article "Parotitis," defines it to be "an acute febrile disease characterized by an anatomical lesion situated in one or both parotid glands, which runs a short course, and almost invariably terminates favorably. . . . Other organs besides the parotid and submaxillary may be affected. . . . The testicles, one or both, may suffer, while in the female the mammæ, the labia majora, and uterus are the parts occasionally attacked. These complications, or metastases as they are called, usually make their appearance whilst the parotid and the submaxillary glands are enlarged; but, on the other hand, the swelling may subside and disappear from the glands, and not make its appearance elsewhere until a period varying from a few hours to one or two days has elapsed. . . . In mumps, have we primarily a general disease of which the local effects are the sequence, or, on the other hand, is the disease in the first instance local, and are the general symptoms dependent on such local mischief? In the present state of medical knowledge *this question cannot be answered.*"

Niemeyer (vol. i. p. 436, *et seq.*) divides parotitis into two varieties: 1, idiopathic parotitis (mumps); 2, symptomatic or metastatic parotitis. He says, "Trustworthy observations render it most probable that the disease (idiopathic parotitis) spreads by contagion. It does not appear to us justifiable (with Rilliet) to consider mumps as an infectious disease, and the inflammation of the parotid gland the local expression of a constitutional disease, and to regard it as analogous to the affections of the skin that accompany the acute infectious diseases. We do not exactly know the ultimate anatomical changes of parotitis. . . . Nevertheless, . . . we may believe that it is chiefly or solely caused by serous exudation. Occasionally in the course of the disease one of the testicles is affected by an inflammation similar to that of the parotid. . . . And cases have also been recorded where, in the course of *idiopathic* parotitis, fatal meningitis has been developed. Infiltration with fibrous exudation and suppuration rarely occur in parotitis."

William Aitkin, M.D., Edinburgh (Science and Practice of Medicine, edited by Meredith Clymer, Philadelphia, 1866, vol. ii.), defines "mumps, parotitis," to be "an inflammation of the parotid gland, probably specific, and certainly in some cases contagious. . . . It is rare that the inflammation ends in suppuration. Occasionally during the course of the disease, but generally during its subsidence, the testicles swell, or the mammæ in the female; and in some cases the cerebral membranes become implicated, as also the gastro-enteric mucous membrane."

Chelius (A System of Surgery, by South, 1847, vol. i. p. 168) says, "As the swelling of the parotid gland subsides, a fresh attack of fever, with severe shivering, with pain in the loins and pubes, takes place, followed by inflammatory swelling of the tes-

ticles, and, in women, of the breasts and pubis. Other parts are also frequently attacked. Drowsiness, severe headache, wanderings, inflammatory or spasmodic affections of the breasts, active vomiting, dropsical swelling of the whole body, with short breathing and high fever, occur. The passage of this inflammation into suppuration . . . is very rare."

Watson (Lectures on the Principles and Practice of Physic, pp. 433-4) says, "Another curious circumstance connected with the disease, and one which has some bearing on its treatment, is that in many cases on the subsidence of the swelling of the neck and throat, and particularly when it subsides quickly, the testicles in the male sex become swollen and tender, and the mammæ in the female. But sometimes a more serious transference takes place,—from the testicle to the brain. This I have never witnessed; but then, to say the truth, I have not often been called upon to treat the mumps, and my personal experience of it is limited. Fortunately, the metastasis to the brain is much more rare than to the testicles."

Churchill (Diseases of Infants and Children) quotes Dr. Dewees, p. 415, as saying, "In the male we *once* saw the testes prodigiously enlarged. Much suffering was endured, and great hazard was incurred by the change. Violent fever and delirium accompanied this change of seat of the disease, and it required very active remedies to subdue them."

Churchill also says, "Again, a similar metastasis *may* take place, and the brain or its membranes become the seat of the secondary attack; and this is more frequent, Dr. Stewart thinks, in cases where no metastasis to the testes or mammæ takes place. This cerebral metastasis is highly dangerous."

Charles West (Diseases of Infancy and Childhood, 4th American edition, Philadelphia, 1866), says, "The occurrence of suppuration in the neighborhood of the gland is a rare termination of the inflammation, but is, I believe, oftener met with in children than in those who are approaching the period of puberty. On the other hand, metastasis of the disease from the parotid to the mamma, the testicle, or the brain, of all of which instances are on record by different writers, appears to be rare in proportion to the tender age of the patient. The most formidable of these metastases, indeed,—that to the brain,—would seem to be an accident very seldom met with; and neither of it nor of the translation of the disease to the mamma or the testicle can I say anything *from personal experience*."

Edward Ellis, M.D. (A Practical Manual of the Diseases of Children, with a Formulary, London, 1869, p. 184), says, "or, metastasis *may* occur, a remarkable feature of this disease to be remembered and watched for; and such metastasis may be either to the brain, which is highly dangerous, and exhibits itself either in coma or delirium, and may end fatally in a few hours, or to the mammæ of the girls and the testes of the boys."

Tanner (Practice of Medicine, American, from 5th London edition, 1866, p. 407): "Cyanche parotideæ, or parotitis, or mumps, is a specific contagious inflammatory disease of the salivary glands,

and of the parotid gland especially. . . . When orchitis has occurred during the prevalence of mumps, it has usually been considered as the result of metastasis."

From the varied views, therefore, expressed by the authors quoted above, an opinion can scarcely be ventured; nor does clinical experience or therapeutics teach us the real nature of that anomalous affection called mumps. Clinical observation alone teaches us that ordinarily in mumps we have to deal with a very simple, tractable disease, and therapeutics develops the fact that remedies are not *always* necessary to guide it to a favorable termination. Yet now and then it becomes formidable, putting at defiance our knowledge, experience, and treatment, and seems to run rampant without let or hindrance, and to increase the violence and danger of other diseases, as epidemics of typhoid and catarrhal affections, in which it frequently mingles its specific character.

Thus it will be seen that—1. Most authors speak of parotitis as trivial. 2. Some regard it as a local, while others regard it as a constitutional disease, while still others state that in the present state of medical knowledge the question cannot be answered, though Virchow, and also Niemeyer, maintain that the affection starts in the gland-ducts of the parotid; and, more recently, Dr. Bouchut, in a note communicated to the Academy of Sciences by Claude Bernard, states that "parotitis is simply a salivary retention, due to catarrhal inflammation" (*New York Medical Record*, September 16, 1873, p. 454). 3. Therefore, while some discard the idea altogether of any metastatic influence, or even the word metastasis, as applied to it, others hold to the old opinion of metastasis. 4. Affections of the brain in the course of parotitis are mentioned by almost all writers as a probable result, and this seems to be simply an opinion passed from one to the other without proof or experience. All speak of it as of extremely rare occurrence. Some are candid enough to say they have never witnessed a case. 5. The few cases reported have all died within a few days. The cerebral symptoms increased, while the inflammation of the parotid decreased. In the case reported above, the cerebral symptoms seemed to begin when convalescence was about to commence,—after the commencement of the subsidence of the parotitis. 6. In regard to suppuration of the gland, one case came under my observation where both glands suppurred. See report of case in the *American Journal of the Medical Sciences*, vol. lii., 1867, p. 560.

CONTRIBUTIONS TO THE PATHOLOGY OF ADHERENT PLACENTA.

BY BEDFORD BROWN, M.D.,

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WITH the hope of throwing some additional light on the nature of the causes and the pathology of adherent placenta, the history of six cases of this peculiar complication which came

under my own observation is given to the profession.

Two of these cases were in primiparæ. Three instances occurred in the same patient in three successive pregnancies. One was in a woman who had borne four children.

Case I.—M., a colored woman, aged about 22 years, being exposed much during the early months of her first pregnancy, contracted a subacute rheumatism, which continued to annoy her during the entire term. During the latter months of pregnancy pain and tenderness in a particular portion of the uterine region were present, which were attributed to rheumatic affection of the abdominal muscles.

After a tedious but otherwise natural labor, the placenta was found to be very firmly adherent to about one-half of its extent to the uterus. The adhesions were so strong that the adhering portion of the placenta had to be broken down and pinched off with the fingers, and removed in detached portions, the entire hand having been introduced into the cavity of the womb. The tissue of the placenta was not only indurated, but contained numerous points of calcareous deposit of various sizes. Alarming hemorrhage followed the operation. At the seat of placental attachment the uterine mucous membrane was evidently indurated, while a rugged exudative material was on its surface. In three or four days after delivery, a severe attack of acute articular rheumatism was developed in the joints of the lower extremities, which abated after several weeks' duration.

Case II.—Mrs. B., aged about 26 years, had pursued always a very active and industrious life, and had been subjected to much exposure, having been compelled to labor for her own support. Three or four years previous to marriage and pregnancy she had passed through a somewhat protracted attack of articular rheumatism, which had left some of the smaller joints enlarged. Her first labor, which was natural, was complicated by adherent placenta. A large portion of the after-birth, on introducing the hand, was found to be closely and firmly adherent, and had to be broken to pieces before detachment. This gave rise to copious hemorrhage. The structure of the placenta was filled with myriads of small calcareous deposits. Many of these little deposits adhered tenaciously to the thick exudation over the point of adhesion. After all of the adherent parts of the placenta had been removed, there still remained a rough membranous formation on that portion of the uterine surface, of almost cartilaginous hardness.

Case III.—This was a married woman, aged about 30, of the laboring class, and the mother of four children. Her labor was an easy one, but complicated with adherent placenta. An effort was made to remove the adhering portion, which was only partially successful, as the patient positively declined to submit to any further attempts. Consequently about one-fifth of the placenta was left in the uterus. For several days hemorrhage was troublesome. About the third day the lochial discharge became excessively fetid, which was soon followed by chill, fever, and great tympanites. The type of fever very soon, indeed almost from the beginning, assumed the adynamic form. For two weeks the discharge continued intolerably fetid, regardless of powerful deodorizers. Occasionally portions of decomposing placenta were discharged. Finally the discharges ceased to be offensive, and all the symptoms which but recently presented so grave a character speedily changed, and convalescence was soon established. This was manifestly a true case of septicæmic fever with inflammatory complication.

In many respects septicæmic fever resembles puerperal peritonitis, and is not always easily distinguished from it. The initiatory chill, fever, tympanites, and abdominal tenderness on pressure, are common to both. In simple septicæmia the symptoms of blood-poisoning from some septic cause, and presenting the gravest type of adynamia, are present from the beginning.

These symptoms always make their appearance simultaneously with an intolerably fetid character in the lochial discharge.

Nothing can be more intensely offensive than a putrescent decomposing placenta enclosed in a uterus, with a temperature varying from 98° to 106°. Thus the situation is peculiarly favorable in this living retort for the generation of offensive and poisonous gases.

These septic products are absorbed by the circulation as fast as generated, until the system is saturated. In these cases delirium, subsultus, dry and brown tongue, somnolence, vital prostration, are among the early symptoms; whereas in puerperal peritonitis the mind is generally clear, the tongue moist, and the strength not greatly impaired until the last, and, in truth, the peculiar features of adynamia are rarely present in the early stages of the attack. In one the vital fluid is first attacked with a dangerous poison, in the other the uterine and peritoneal structures with inflammation.

In regard to those peculiar cases, it is remarkable how small a portion of decaying placenta left in utero will become a source of septicæmia, and again how rapidly in a certain proportion of cases the septic symptoms will subside and the system recuperate after the cause is removed.

Cases have come under my own observation where small portions of placenta have been discharged in two or three days after labor, and after the placenta had escaped from the uterus by natural means, which doubtless had adhered to the uterus. In one case of natural labor, where the placenta had been expelled by natural means, and where to all appearances this body was perfect in form and appearance, in twenty-four hours a lobule was found protruding from the vagina, in every respect having the organized structure of the placenta, but distinct, and having a small pedicle which was the only means of connection with the placental mass, and which had probably adhered to the uterus. It appeared as a minute placenta.

Cases IV., V., and VI.—Mrs. R., a woman of 35 years, and the mother of three children, after a very protracted and severe attack of acute articular rheumatism which left one knee-joint completely ankylosed, and before complete recovery, became pregnant with her fourth child. During this entire pregnancy she continued to suffer from the rheumatic affection. In November, 1870, she was delivered of a living child, after a natural labor. The placenta was found to be very extensively and firmly adherent, probably to two-thirds of its surface. The medium of attachment was so tough and firm that it became necessary, in order to facilitate removal, to introduce the hand and break down the placenta, and remove it in detached portions. But the operation being a painful and tedious one, before completion the patient positively declined further inter-

ference, and consequently a portion of that body was left adhering to the uterus. During and after the operation, hemorrhage was very copious. The tissue of the placenta was softer than natural, and had apparently undergone a species of granular degeneration.

On the third day after delivery the lochial discharge became very offensive, and very soon chill and septicæmic fever of an adynamic type supervened.

The remains of the placenta occupied more than two weeks in dissolving and passing away. During this time the discharges were intolerably fetid. While this process was going on, the fever assumed the most serious and alarming type; but during the third week the lochiæ became natural, and the peculiar adynamic fever, which had reduced the patient to almost a hopeless condition, disappeared as if by magic.

In 1872 Mrs. R. again became pregnant, and was delivered of a living child. The placenta was found to be adherent in this instance also, but not to the extent as in the former case. All the adhering portion was carefully pinched off from the uterine surface. With the exception of some hemorrhage, no ill effects ensued.

It is proper to state here that the patient continued to suffer from rheumatic symptoms during this pregnancy.

In 1873 she again became pregnant. During this time she suffered considerably from her usual rheumatic affection.

In May, 1874, she was delivered of a large living child. On this, as on the two previous occasions, the placenta was adherent to fully one-half of its surface. The portion adhering was removed with the greatest care, by pinching every particle off. The medium of adhesion was composed of a very dense and tough exudation, apparently one-fourth of an inch thick. The hemorrhage was, for a time, quite copious.

While exploring the cavity during the operation, an indurated point was detected, very rugged and hard, and elevated above the mucous surface at least half an inch, and as large as the palm of the hand, surrounded with the soft and velvety mucous membrane of health, about the seat of the old placental adhesion. All of these adhesions were located in the front wall of the uterus.

In all of the cases of adhesive placenta which I have here reported, the females belonged either to the middle or lower classes, and were in the habit not only of performing daily labor, but also of frequent exposure to cold and wet.

During a practice extending over a period of more than twenty years, I have never witnessed an instance in the higher walks of life, or among the affluent. With but one exception, these females had been the subjects of a well-marked rheumatic diathesis.

Whether in these cases adherent placenta and rheumatic disease occupy the relationship of cause and effect, or, on the contrary, were merely coincidental, is a question of some interest. In five of the cases there were structural changes in the uterine tissue at the point of adhesion, indicating positively subacute inflammatory action of a circumscribed character; and though there was evidence also of degenerative change in the structure of the placenta, there was none of previous inflammation. But in the first case there were indications of organic uterine disease and placentitis, both associated in the same case. Two interesting questions naturally arise here: one, whether females who are the subjects of a rheumatic diathesis are more disposed to adherent placenta; the other,

whether or not the process of adhesion is the result of a local circumscribed inflammatory action of a rheumatic character, situated in the uterine tissue. The facts cited in the foregoing cases indicate very pointedly that the latter view is really the true one. There is another fact in connection with these cases, of interest: all of the children were not only living, but the most of them large and vigorous.

The history of these cases goes far to confirm the truth of the principle that evil consequences are infinitely more liable to result from leaving portions of placenta adhering to the walls of the uterus than from any mechanical injury inflicted during the operation of removing them from that organ; that while inflammation is rarely the consequence of the act of removal, septicæmia is the almost invariable result of leaving any portion in utero. It is astonishing how long a time a small portion of adherent placenta will require to undergo dissolution and discharge, and how little of it will act as a poisonous fountain to infect the system.

REPORT OF TWO CASES OF AMPUTATION IN WHICH A MODIFICATION OF THE ESMARCH APPARATUS WAS EMPLOYED.

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THE occurrence of paralysis of greater or less duration, consequent upon the employment of the Esmarch apparatus for bloodless operations, having been reported by Langenbeck, induced me, in the operations below reported, to substitute for the rubber tube as originally suggested by Esmarch a rubber band one-half the width of that which is applied to the extremity. This was done in the belief that the paralysis was caused by the direct and forcible pressure made by the tube over a limited surface, which it was hoped could be avoided by the use of the band, which would, as it were, distribute the pressure. It has been suggested, however, that it is not simply the pressure made by the tube which causes the impairment of nervous power in the part, but that accomplished by the entire bandage, applied as it is with firmness sufficient to expel the blood from the superficial and deep vessels of the part. Pressure so great as to accomplish this result must certainly affect both the large and the small nerve-trunks; at least, the benumbed feeling experienced after the application of the bandage would imply this.

In the cases thus far reported, the paralysis has disappeared under treatment which had to be continued for a variable length of time. It would therefore appear that whether the injurious effects were produced by the tube or by the tube and bandage combined, the pressure was not sufficient to destroy the integrity of the nerve-trunks and thus completely destroy their power of transmitting impressions. The experiments made by Dr. S. Weir Mitchell on the effects of pressure on nerves, and his remarks upon the subject in his admirable treatise on "Injuries of Nerves," are of interest in con-

nection with the conditions under discussion. In speaking of the mechanical influence of pressure, he says, "A nerve-trunk is made up of a multitude of tubes, the contents of which are so nearly fluid as probably to be capable of more or less movement to and fro. When to such a bundle we apply a tight ligature, no matter how soon it be relaxed, we annihilate at once all power of the nerve to transmit impressions past the injured zone. If, however, in place of this, we make *gradual and equal pressure*, we may so affect the nerve as for a time to destroy its power to carry impressions. Now, this is exactly what occurs in many cases of compression: the nerve is for a time incapacitated, but soon regains its normal abilities."

Even in the most exposed positions, as the median nerve in the middle third of the humerus, it is questionable whether the tube, applied with the firmness necessary to prevent the return of the blood to the vessels, could so far act as a ligature as permanently to injure the nerve. Without doubt it is capable of making such pressure as temporarily to destroy its power of carrying impressions. The band also applied to the entire extremity or the greater part of it makes forcible, but at the same time gradual and equal, pressure, and is quite sufficient, to my mind, to produce an interruption in the nervous current. It would seem, therefore, that paralysis both of sensation and of motion, to a greater or less extent, must necessarily follow upon the application of such pressure as will empty the deeper blood-vessels of a part and maintain them in this condition.

One of the cases in which the bandage was used being an amputation through the middle of the arm, it was of course impossible to gain any information upon this point from it. In the other the patient complained of numbness and loss of motion in the hand for ten days following the operation, although the bandage was applied only to the middle of the fore-arm.

Case I.—J. R., colored, æt. 37, has suffered from tertiary syphilis, losing cartilages and bones of the nose; at present is suffering from arthritis of the wrist-joint, which has undergone suppuration and has resisted all methods of treatment. The elbow-joint is also involved, being much enlarged, and showing evidences of suppuration within. The patient was placed upon tonic and specific treatment, which did not retard the progress of the disease and prevent deterioration of his health. The removal of the arm, so as to interrupt the constant drain upon his system, appeared to be the only plan of treatment which afforded any promise of success. In his wretched condition, destroyed as he almost seemed to be by the ravages of syphilis, it was a question whether interference with the knife would be followed by any reparative efforts on the part of nature. As will be seen, we were most happily disappointed in this respect. Covering the ulcerated surface with a compress (waxed paper is better), the wide band was applied, beginning at the fingers and continued to above the middle of the arm; the narrow band was then applied, and the wide one removed. Amputation by the anterior and posterior flap method was performed. The cut surfaces were perfectly bloodless-looking,—as expressed by one of the gentlemen present, like veal which had been well bled. Ligatures were applied to five arteries, which were pushed

out of the tissues, as it were, and were readily recognized. One small muscular branch was missed, and required ligature after the removal of the constricting band; slight oozing occurred, but was easily checked by the application of cold water; the flaps were sutured, and dry dressings were applied to the stump. Notwithstanding the most unfavorable surroundings, the patient recovered without an untoward symptom. The operation did not appear to produce any shock, the pulse maintaining a uniform rate and volume from the first. There were present at the operation Drs. Owen, U.S.N., Austin, Mann, Barr, Purcell, and Mr. Soder, medical student. To Dr. Purcell and Mr. Soder much credit is due for their faithful care of the patient.

In reviewing this case, it has occurred to me that the apparatus, by retaining to the system the blood contained in the arm, and preventing subsequent loss, contributed largely to success. The patient's condition was certainly such as forbade the loss of any great quantity of blood. None of the sequelæ attributed to the use of the apparatus occurred, such as excessive capillary oozing and sloughing of the flaps.

Case II.—Operation at Bedford Street Hospital, for removal of index-finger with metacarpal bone. A. S., æt. 32, German, twelve weeks previously had wounded index-finger with shoemaker's knife; sloughing of soft tissues, with necrosis of phalanges and metacarpal bone, supervened. Apparatus was applied, the narrow constricting band surrounding the middle of the forearm. The tissues were rendered bloodless, and the operation, which was tedious, owing to the condition of the parts and the desire to save as much of the hand as possible, was performed. Two vessels required ligation. After the removal of the constricting band, considerable capillary oozing took place, which was controlled by application of cold water. The parts were approximated by wire suture, and lint, wet with carbolic oil, was applied. The parts healed rapidly.

As stated above, impairment of sensation and motion in the hand followed the application of the apparatus, and persisted until the tenth day. Nothing was done to relieve it, and it spontaneously disappeared.

If we can reason from the facts in this case, it would appear that paralysis follows application of the narrow band as well as of the tube, but that, owing to the distribution of the pressure over a greater surface, the nerves are less affected and sooner regain their normal powers.

PYÆMIA IN THE HORSE.—Dr. Crombie reports (*Indian Medical Gazette*) a case of this disease occurring in a horse subsequent to an injury to the foot. The sore became phagedenic, the animal feverish, and at last gangrene and separation of the foot took place, followed by death. The post-mortem examination showed multiple abscesses, varying in size from a marble to a billiard-ball, scattered through the lungs and pleura, and in the former locality surrounded by a pneumonic condition. No abscesses were found elsewhere in the body. A breaking-down cheesy mass of degenerated gland-tissue was found in the axilla corresponding to the wound.

THE ACTION OF BROMIDE OF CALCIUM AND OF BROMIDE OF POTASSIUM.—The former salt acts only on the nerves, but it produces less sedative effect than the potassium bromide, and it does not act at all on the heart, as does the latter salt.—*Guttmann and Eulenburg—Ber. Klin. Wochenschrift.*

PHILADELPHIA MEDICAL TIMES.

A WEEKLY JOURNAL OF
MEDICAL AND SURGICAL SCIENCE.

The Philadelphia Medical Times is an independent journal, devoted to no ends or interests whatever but those common to all who cultivate the science of medicine. Its columns are open to all those who wish to express their views on any subject coming within its legitimate sphere.

We invite contributions, reports of cases, notes and queries, medical news, and whatever may tend to increase the value of our pages.

All communications must bear the name of the sender (whether the name is to be published or not), and should be addressed to Editor Philadelphia Medical Times, care of the Publishers.

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EDITORIAL.

A MEDICAL CHARITY.

THE money which has been given in this city for charitable objects during the last two years amounts to so large a sum that we hesitate to suggest anything more at present.

We have, however, been induced—by seeing that Mr. Thomas Banting has left over \$100,000 for building a Convalescent Home, to be called the Banting Memorial—to cast some bread upon the waters, hoping it may return after many days in the shape of a handsome legacy or gift to charity. With the value of these convalescent homes our readers are as well acquainted as we are; it may be, however, that some have never noticed the complete barrenness of our city in this regard. Will not all do what they can to direct the minds of the wealthy and charitable in such direction?

AT the meeting of the Detroit Academy of Medicine, March 26, 1874, a communication was read from a corresponding member, calling attention to the explosive qualities of a mixture of carbolic acid, olive oil, and glycerin. The facts as stated were as follows: "In preparing a dressing for a contused and lacerated wound of the scalp, I poured into a four-ounce bottle about three fluid-ounces of olive oil, a drachm of liquefied carbolic acid, and two drachms of glycerin. The vial was duly labelled and corked, and carried about eight miles on horseback to the patient's house. About

thirty hours after its preparation, the vial, containing about one-half of the original amount, was standing upon a small table, in a room of ordinary temperature, surrounded by vials and sundry other articles,—among them a lighted kerosene lamp,—when a gentle explosion occurred, blowing off the top of the vial and spreading the compound uselessly around, but doing no further damage."

THE editors of *The St. Louis Medical and Surgical Journal* propose the following conundrum in alluding to one of our editorials upon the American Medical Association: "How could the Association go to an Eastern city without an invitation?" We give it up,—contenting ourselves with stating that the last meeting held in the East was in Philadelphia, and that an invitation for 1876 has already been offered. It is a somewhat remarkable and, we may say, disgraceful fact that no other Eastern city invites the Association,—a fact, however, which shows the want of interest in the Association east of the Alleghanies.

LEADING ARTICLES.

LEGISLATION FOR THE INSANE.

IT is a curious fact in the history of American legislation, one which has escaped the attention even of De Tocqueville, that the subjects on which our legislatures have most delighted to exercise their law-making privilege have not always sprung up sporadically, as it were, but have often prevailed epidemically, and exhibited that double phasis of other epidemics,—viz., of either being confined to a narrow locality, or pervading the whole country. Among our juvenile reminiscences of the Old Bay State was the fact, as patent as any gospel truth, that no member of the Great and General Court ventured to believe that he had fully discharged his duty to the State unless he had labored for some change in the militia laws or some new regulation for the taking of alewives in Taunton River. In these latter days the favored subject of State legislation has been the rights and privileges of the insane; and it has prevailed pretty extensively. The key-note to this movement is the popular conviction that insane people who are confined in hospitals are really not insane,—at least not many of them,—and that the officers of those institutions, the family of the patient, and physicians generally, are engaged in a conspiracy to tear people from their homes and confine them in prison on the false

pretence of insanity, for the purpose of accomplishing some scheme of wickedness. The great apostle of this new gospel has become qualified for her mission by several years of duty as patient in hospitals for the insane, and she believes that half the community will ultimately get shut up, unless every State places its hospitals, the patients, officers, attendants, and directors, under the supervision and control of a permanent committee of men and women, who may enter it when they please, hear the complaints of patients, sit in judgment on the alleged offences of officers and attendants, and distribute their censures with an unsparing hand. It being understood that all concerned in the management of these institutions are utterly untrustworthy,—even the directors who are appointed by the Executive from among those supposed to be best fitted for the duty by character and social position,—the patients are to be allowed to correspond as they please, with whomsoever they please, the letters in both directions to be unopened by the officers. This woman visits the State legislatures, and, with that sort of cunning which is only increased by insanity, she appeals to women of the strong-minded sort, and to men of no minds at all, by artfully playing upon their prejudices, to pass her bill. In Maine and New Hampshire (for her operations this year have been confined to New England) she is said to have succeeded. In Connecticut and Rhode Island she failed. The people of those communities “couldn’t see it,” as the phrase is. They said, If the board of directors who have been selected for their integrity and capacity require to be watched and called to account by a special board with paramount power, then, for an equal reason, this special board will need to be watched and controlled by another board, and so on *ad infinitum*.

In this State the legislation for the insane last winter was in another direction, and not inspired by Mistress Packard. Her turn, probably, will come next. An act was passed providing for the removal to the State hospitals for the insane of all prisoners in the jails and prisons of the State found to be insane, both those who were acquitted of crime on the ground of insanity and those who had become insane after conviction. The passage of the act, as might be supposed, was strongly opposed; for the idea of turning some scores of criminals into the abodes of the insane was not a matter of pleasing reflection. A letter was addressed to the General Assembly by most of the superintendents of the lunatic hospitals of the State, declaring in the strongest terms against the passage of the act,

and advising the construction of a hospital designed expressly for this class of the insane. Miss Dix, whose word ought to be law in whatever concerns the welfare of the insane, on hearing of the project, hastened to Harrisburg and opposed it with all the fervor of her earlier years. The bill was voted down at first, but, by one of those manœuvres which politicians know so well how to use, it was brought up again, and received the requisite majority.

That many of the “criminal insane,” as they are called, should be confined in a manner very different from that of other convicts is not denied; but it is equally true that many of them need surroundings as strong and a discipline as strict as those of sane criminals. They are essentially and constitutionally criminals, their insanity being only a casual incident, rendering the criminal element in their character so much the more dangerous. They are the last description of people to be placed in intimate association with the ordinary insane, for their moral influence cannot be supposed to possess any healing virtues. In reply to this, the friends of the measure say that they are to be kept together in wards by themselves, and thus debarred from all intercourse with others. This only shows how little they know of the management of a modern hospital for the insane. Are they not to be allowed to work on the farm, or in the working-rooms of the house, to attend the service of the chapel, to witness the exhibitions or join in the amusements? If they are not to share in the privileges and appliances that characterize the present hospitals, wherein are they benefited by removal from the prisons? If safe-keeping and cleanly habits are all that their case requires, these, certainly, can be obtained as well in a prison as in a hospital. Even were it practicable and desirable to maintain such a separation,—to establish a prison within a hospital,—the result would be none the less mischievous, though in another direction. Such an arrangement implies an essential difference in the moral management. Kindness, no doubt, would be the ruling principle, but in the one case it would be marked by a lack of those indulgences proper enough in the other, and of that freedom and courtesy which distinguish the intercourse between the attendant and the ordinary patient. It needs little knowledge of human nature to see what would be the final result of establishing under the same roof and the same government two modes of management so radically different. One would soon partake of the features of the other, and the whole house would become either a prison with none of its securities, or a hospital demoralized by an intrusive and mischievous element.

Especially is this measure to be deprecated for its tendency to invest the hospital with disagreeable associations and thus increase the too common reluctance to seek its benefits. It has ever been considered as a great step gained in the cause of humanity, that it is now deemed all-important that the hospitals for the insane should be assimilated as nearly as possible to ordinary domestic abodes, and made attractive and pleasing by the little adornments of a refined taste. It has been regarded as one of the triumphs of the philanthropy of our time, that, under its benign influences, insanity has been stripped of the repulsive associations connected with it, and redeemed from the imputation of disgrace which has been so freely put upon it. Certainly, if anything is calculated to renew the old odium attached to insanity, and render its abodes hateful, it is this measure of discharging into them some of the worst elements of our prison-population.

There is another objection to this new act that ought to have had weight even with those who were disposed to make light of every other, for it is difficult to see how there can be two opinions respecting it. It is well known that our two State hospitals—one at Harrisburg, the other at Danville—are now crowded to their utmost capacity. Of course, to make room for the convicts, just so many of the present inmates will have to be discharged. We have supposed we were not behind our neighbors in true regard for the criminal classes, but it never occurred to us that their offences constituted a claim for superior privileges over those granted to the honest poor. If this is really so, then they whose sons or daughters have been sent home to make way for the convicts have only to incite them to commit some criminal offence in order to get them restored to the hospital. Enough has been said, we hope, of the mischievous consequences of this act, to convince every one not committed to it by some partisan spirit, that it is founded on a series of gross mistakes.

Another act was passed, providing for removal to the hospitals of such insane persons now in the county poorhouses as "cannot receive proper care and treatment, or are probably curable." The question is not to be asked if the hospitals have room for them, so that, of course, for every one of this description admitted, a present inmate must be discharged. Pauperism is made the ground of preference in this act, as criminality is in the other. In the matter of their support, the patients in our State hospitals are composed of two classes, viz., those who are maintained by the county to which they

belong, and those who are maintained by themselves or friends, the charge being the same in both cases. While there was room for all, all were received without distinction. At last, the applications for admission exceeded the capacity of the establishment, and some of them had to be rejected. In order to effect the greatest amount of good, the rule was adopted of taking only curable cases, whether supported by their friends or by the public. Such is the policy that has always been pursued by similar institutions in other States, in similar circumstances, simply because it is the dictate of common sense and common humanity. The friends of the act, however, favored with light not vouchsafed to common mortals, declare that this is all wrong,—that an incurable, provided that he is a pauper or a convict, should be kept in the hospital till the day of his death, rather than that a score of curables supposed to be yet endowed with ever so small an amount of worldly goods, should be treated within the same period, and restored to society. The objection to the latter—that which is to shut them out from the institutions which they have all their lives been taxed to support—is that they are able and willing to pay a trifle for their board. This circumstance, it seems, places them in the category of rich patients, and they are told to resort to the private asylums. The idea of such persons going to private or corporate hospitals would be perfectly ludicrous were it not perfectly heartless. It must have been suggested by the story of the little princess who, on being told that the people outside the palace were crying for bread, asked why they didn't eat cake. It is one of those facts in our social economy, known, we had supposed, to everybody pretending to any knowledge of this subject, that a very large majority of our insane come from the humbler classes,—from those who, by dint of industry and frugality, have acquired a trifle of property, and are thus able to meet an exigency slightly taxing their resources, without calling upon the public. This fact has been recognized all the country over, in the establishment of the State hospitals for the insane; for in every instance the price of board has been set at a very low figure, scarcely sufficient, indeed, to meet the current expense, in order that people of small means might be induced to avail themselves of the benefit of early treatment.

In many of the Western States, admission to the hospital has been made perfectly free to all, like the waters of life, without money and without price. The whole history of these institutions shows that they were not intended solely for paupers, but were also designed to meet a state of things mostly pe-

cular to our time, implied in the facts that insanity has become very common, that it occurs in a great degree among the poorer classes, that early treatment is all-important, and should be brought within the reach of people of the smallest means.

We ask the friends of this new measure what is to become of these paying patients who retire in order to make room for the paupers, and we are told that they must go to the private and other asylums that are paid for taking care of the insane. We have more respect for the understanding of these gentlemen than to suppose they clearly bear in view all that is implied in their reply, and believe it is given more to stave off an inconvenient inquiry than to meet squarely the exigency they have created. Our friend Dr. Given at Burn Brae might take in four or five, at \$18 or \$20 per week. The Pennsylvania Hospital would receive twenty, perhaps, at the minimum price of \$9, and the Friends' Asylum at Frankford might, possibly, make room for half a dozen more at the same price. The true reply to the question would be that they would be sent to their homes, whence, after exhausting the domestic patience and the domestic means, they would finally drift into the county poorhouse.

Such was the legislation of our State last winter concerning the insane. Our only hope is that those who are intrusted with the carrying out of the new laws will shrink from their complete execution, and thus mitigate the evil, until better counsels shall lead to their repeal.

I. RAY.

PROCEEDINGS OF SOCIETIES.

MEDICAL SOCIETY OF THE COUNTY OF ALBANY, NEW YORK.

SEMI-MONTHLY MEETING, MAY 27, 1874.

The PRESIDENT, DR. JOHN SWINBURNE, in the chair.

DR. WILLIAM H. CRAIG reported the following case of *puerperal convulsions treated with veratrum viride and chloral hydrate*: Mrs. S., æt. 24, primipara, married two years, of delicate constitution, frail and anæmic, was delivered of a male child weighing eight and a half pounds, March 30, 1874, after an easy and natural labor of ten hours' duration; the second stage only lasting three hours. After taking nourishing drinks, slept, breathed easy, and remained apparently quietly reposing for four hours after delivery, at which time she awoke and complained of nausea; in the act of vomiting went into a convulsion, which lasted about three minutes. Dr. Craig saw her soon after, when she had in his presence a second convulsion, which was characterized by the symptoms of puerperal eclampsia.

When the convulsive action ceased, the breathing became stertorous, with coma, which soon passed off;

unconsciousness and restlessness followed, and attendants were required to keep her in bed. Her pulse was 120 per minute, and full. She talked incoherently, and complained of headache. She had had hysterical spasm previous to marriage; a knowledge of this fact induced Dr. Craig to give bromide of potassium in twenty-grain doses every half-hour, without producing any modification of the symptoms, the convulsions occurring every fifteen or twenty minutes until six hours had transpired, when Dr. Quackenbush was called in consultation. He advised the use of veratrum viride, with chloral in combination. Squibb's fluid extract of veratrum was ordered, but in its absence the apothecary sent the official tincture. When the use of the tincture was commenced, convulsions were occurring regularly every twenty minutes; pulse 140, and full; fifteen drops of the tincture and twenty grains of chloral were given every fifteen minutes, with gradually increased doses, until nearly a drachm of the tincture and forty grains of chloral were given at a dose. In three hours $\frac{31}{2}$ of the tincture of veratrum had been given, yet the pulse remained unchanged, showing the inertness of the official tincture of veratrum. The convulsions were, however, gradually diminishing in frequency, now occurring every forty or fifty minutes, but were very severe. In four hours after commencing the tincture of veratrum Dr. Craig procured Burrows's fluid extract of veratrum, and administered gtt. 20, ten minutes after which the last convulsion occurred. In one hour thereafter he gave 20 gtt. fluid extract veratrum and 40 gr. chloral; pulse 108. In an hour and a half more gave 20 gr. of chloral and 6 gtt. fluid extract veratrum. In two hours after the combination was given the pulse was reduced to 70. The veratrum was then discontinued; the chloral was administered in from 40 to 20 grain doses until about thirty hours had transpired after delivery. The urine was then examined, and found to contain a small quantity of albumen, but no casts.

April 1, 9 o'clock A.M.—Had a quiet night; remained in a sleeping stupor, but could be aroused; had frequently taken nourishment; could answer questions, but not altogether conscious. The urine was drawn with catheter, and one-fourth grain of extract of elaterium was administered in two doses at intervals of three hours, which was followed by free catharsis. After this it was not necessary to give more medicine. The convalescence was rapid and complete. At the end of two weeks she was able to sit up more than half the time. Lactation took place naturally, and both mother and babe did well. In all, two hundred and eighty grains of chloral and forty-six drops of the fluid extract of veratrum viride and one ounce of the official tincture were given in the space of eighteen hours.

It is evident that the official tincture of veratrum is an unreliable preparation in such cases, as shown by the fact that one ounce of it was given to the patient in the course of four hours without producing any perceptible influence on the pulse, while the fluid extract of veratrum caused a decided reduction of the action of the heart upon the administration of the first dose, and in two hours diminished the pulse from 140 to 70 beats per minute. Dr. Craig said that he wished to direct the attention of the Society to the remarkable influence of the remedies combined in the treatment of a disease so fearful to contemplate, and so often fatal.

He had had occasion in an address before the Society to make the following remark: that he believed the next decade would develop many marvellous changes in our knowledge of therapeutics, in which practical medicine will become more demonstrative and less theoretical than heretofore. He thought the case presented might verify the statement made, for, according to his experience, the means formerly used in the treat-

ment of similar cases would not have saved this case from a fatal termination. It also confirmed the statement made by Dr. Squibb before the King's County Medical Society, when the use of veratrum in the treatment of eclampsia was under consideration. Dr. Squibb remarked, "The cases of puerperal convulsions reported here treated by veratrum proved to his mind that there is no fixed dose; the test must be the effect produced, and not the number of minims given."

"The tendency in therapeutics at present seems to be to get rid of the trammel of doses."

Dr. Craig continued, and said that very many cases of puerperal convulsions had been reported in the various medical journals treated by veratrum alone by numerous physicians, and quite successfully, and some fatal cases are mentioned where it seemed to him if the chloral had been combined with the veratrum a disastrous result might have been averted. Other cases have been treated by chloral alone; each remedy has its advocates. The *New York Medical Record* and the *Obstetrical Journal* contain numerous reports of cases treated by each remedy alone, but he had not seen where any case had been treated by the combination of both remedies.

If the pathology of eclampsia is considered according to the modern theory, which may be expressed in a single word, "irritation," we can then better appreciate the influence of the two remedies in controlling this disease.

Dr. Robert Burns, in a recent lecture in which he speaks of the treatment and etiology of puerperal convulsions, gives four cardinal points for guidance—viz., "1, to moderate central nervous irritability; 2, to cut off emotional irritants or excitants; 3, to cut off peripheral irritants or excitants; 4, to eliminate all complicating morbid conditions."

Dr. Radcliff, in a work recently published on disorders of the nervous system, advocates the theory that nervous irritation may be reflected to the nervous centres through irritation of the uterine nerves and excitation of the coats of the blood-vessels.

The chloral undoubtedly allays the irritation of nerve-centres, while the veratrum lessens the excitation of the coats of the blood-vessels by reducing the vascular action.

Dr. QUACKENBUSH said that the ideas expressed in reference to the cause of puerperal spasm are generally erroneous. It is generally supposed to be in some way connected with the kidneys. Albuminuria is often present in some stage of pregnancy or labor. Why it should appear at this time is not understood. The pressure of the gravid uterus on the ureters or renal vessels is not now the accepted theory. Fibroids distending the cavity and pressing on the kidneys do not produce it.

Barnes is of the opinion that the kidneys being overtaxed with eliminating excrementitious matter is the cause. We may have symptoms in the early stage without convulsions. Some think it is caused by nervous irritation. Whatever the cause may be, the consideration is to remove the great central irritability. Under these circumstances it is considered best to bring about labor as speedily as possible. The practice is not to use force; if necessary, rupture the membranes and wait for nature.

Chloroform is recommended, not to arrest spasms, but to prevent them. It is important to remove external excitants, that is, to exclude noise, light, loud talk, etc., and then use chloroform to blot out memory and render it oblivious to these circumstances. Again, remove all peripheral excitants; use no cathartics or blisters or cold water dashed into the face. By using veratrum and chloral we regulate the circulation and quiet the nervous system. Dr. Quackenbush was of the opinion

that chloral served a better purpose than chloroform. The veratrum diminishes the great action of the heart and circulatory system; when this is left unabated it facilitates the absorption of the poison carried through the circulation.

Dr. JAMES S. BAILEY said that at the recent meeting of the Pennsylvania State Medical Society this subject was discussed through reference to it by Dr. Atkinson in a paper in which he reviewed the progress of gynecology and obstetrics during the past year. The doctor advocated the use of chloral strongly. Distinguished physicians joined in the discussion, and among them Prof. Gross, who insisted that the dose must be at least thirty grains repeated frequently. Others employed it by the rectum when the stomach could not tolerate it.

Dr. Bailey also referred to a recent article appearing in the *Western Lancet* by Dr. Deane, who urges the advantages of chloral strongly, after an extended use of it. When eclampsia was suspected, fifteen grains of chloral were administered every twenty minutes until sleep was produced. He further recommended the use of the drug for thirty-six hours after labor is finished.

One case was mentioned in which two hundred and fifty grains were used in thirty hours, with the happy effect of controlling the convulsions and facilitating recovery. The patient was delivered with instruments. Her urine was impregnated with albumen, filling a test-tube half full after delivery; in forty-eight hours thereafter it had entirely disappeared.

The PRESIDENT inquired what proportion recovered when treated with these remedies.

Dr. W. H. CRAIG said that he had not noticed similar treatment in any of the medical journals, and inquired of Prof. Quackenbush if he had.

Dr. QUACKENBUSH said that he had not. He had, on the same day that Dr. Craig's case occurred, been called to see another case of puerperal eclampsia with Dr. Fowler. They had used two grains of chloral every half-hour. The patient made a good recovery. In this case spasms came on before delivery.

Dr. LORENZO HALE mentioned a case which had recently come under his observation, of protracted labor. He had found it necessary to give in the course of three days, to relieve the nervous irritability, between six and eight ounces of chloroform by inhalation. He had no doubt but that a considerable quantity was lost by evaporation. During this interval he had given, in addition, three hundred grains of chloral, in doses of fifteen to twenty grains at short intervals. Consultation was summoned, but the patient died. Dr. Vanderveer made the post-mortem examination. The uterus was found well contracted. On opening the stomach, a peculiar odor resembling chloral was perceptible, and the coats of the stomach separated like wetted brown paper. The impression was that the chloral had been instrumental in producing this effect.

Dr. SWINBURNE referred to the case of a girl who had died mysteriously, in Hudson. It was suspected that she had had an abortion produced. Her stomach was obtained and examined by a chemist, who found no cause for death in its contents. The same condition was noticed in this case. Dr. Swinburne was of the opinion that this condition was caused by a post-mortem change. This same stomach was submitted for examination to physicians in New York City, Dr. Clark and others, who thought the gastric juice had produced the softening of the coats.

Dr. VANDERVEER, when asked if he had ever noticed a similar condition of the stomach, said that he had, in the person of a besotted man who had died with delirium tremens.

Dr. J. B. STONEHOUSE spoke of the use of chloral in insane asylums, and in the event of death no unusual condition of the stomach had been found. He

mentioned one case where a patient had taken forty grains per day for at least seven months without producing any derangement of the stomach. So noticeable was the fact that it had suggested the propriety to the attending physicians of using chloral for indigestion.

Dr. JONES inquired whether any member had had experience in reference to the internal use of chloroform.

Dr. JAMES S. BAILEY said that he had, and had found it particularly serviceable in relieving acute spasmodic pain. He had frequently given teaspoonful doses, repeated in half an hour if necessary. Its first effect was to stimulate like alcoholics, and then came drowsiness and sleep. He had frequently seen patients while coming under the effects of it talk incoherently, but this would soon subside, and be succeeded by quiet repose.

Dr. F. C. CURTIS reported the following case of *tuberculous ulceration of the larynx*, and presented the pathological specimen of the same.

G. S., æt. 28, laborer, was first seen about three months before death. He came to the office complaining mainly of trouble in his throat,—did so at the earnest solicitation of his friends. He had been hoarse for a year back. This came on gradually, and for some time he had not been able to speak above a whisper. There was never much pain in the part. He had been engaged in herding cattle at West Albany yards, and the cause assigned for his throat-affection was shouting to the cattle while driving them.

His father said that he had been very intemperate in the use of his voice, straining it without reason. The same lack of care had been observed in other things: he had exercised violently, and then sat in a cool place chilling his body, or had drunk immoderately of cold water, and sometimes of alcoholics. He had not been excessive, however, in the use of the latter.

His father stated that he had had a cough for several years past, particularly after a slight exposure. For the last three years this had been more steady. He had been irregular as to the time of taking food.

Still, in spite of cough and dysphonia and utter disregard of health, he had, until recently, been a pretty strong fellow, and had never had any severe sickness. He had had occasional pain in the chest, more of late, which was not severe. He had, too, lost strength somewhat, and emaciated. Expectoration was and had recently been somewhat abundant. No night-sweats.

Having come principally on account of his throat, it was examined with the laryngoscope. There was found moderate œdema of the aryteno-epiglottidean folds on both sides, extending pretty uniformly around the glottis. The epiglottis was not affected, and a very good view of the cords throughout, with their surroundings, could be obtained. A large ulceration was found on the right side, posteriorly, over the arytenoid cartilage, affecting the posterior third of the vocal cord, but having its centre above it in the ventricle. Phonation was prevented by the inability to bring the two vocal cords in contact, from loss of substance and circumscribed action of the left cord. The ulcer was quite deep, but not abrupt; nor was there thickening or granulation of the edges. Outlines were ragged. No apparent discharge. Surrounding it were congestion and moderate œdema, but no other lesion was discovered. Anæsthesia of the throat generally was somewhat noticeable, as the first examination was readily borne.

Examination of the lungs showed consolidation at both apices, and fluid in the bronchi. His general appearance was fair.

Treatment was directed solely to his general condition. Tonics and cod-liver oil were given, and directions as to care of himself. He came to the office at irregular intervals for a few times, no particular change

being noticed. He then ceased to report himself, and occasional word was brought that he was failing. It is probable that he took but little care of himself. He gradually failed in strength, and night-sweats, very profuse, with severe hectic fever, came on.

Called to see him near the end of February, six weeks before he died. Found the affection of the lung had extended very rapidly, and was far advanced from the condition of a month before. Mucous and submucous râles were heard all over both lungs, and there was evidence of cavities forming at both apices. Cough was harassing and constant, expectoration being very abundant. He had but little pain, but was unable to sleep from cough and sweating at night. The latter was checked somewhat by sulphuric acid and hyoscyamus. The bowels were not affected. There was no change in throat-symptoms. From this time the disorganization of the lungs advanced rapidly. He emaciated, and œdema of the face and extremities came on. He kept about the house to the last, and rode down town in a car a fortnight before he died. He was perfectly conscious to the last.

Died April 7.

Post-mortem twenty hours after death. Body much emaciated, and extremities œdematous.

Thorax.—Both lungs were bound by very firm adhesions to the chest-walls for the upper third, lung-tissue tearing up on attempting to separate them. This was more extensive with the right lung, and at one point there was a ring of adhesions two inches in diameter, into which a cavity of the lung had perforated, matter and air oozing out as the lung was removed, at this point, which was under the scapula.

There was a small amount of effusion into both pleural cavities.

There were deposits of tubercles throughout both lungs, studding them so abundantly as almost to solidify the tissue in parts. This was mostly of miliary size; but there were masses of the size of a hazel-nut. In the lower lobes there were recent gray tubercles; farther up they were caseous at the centre and at the upper fourth of both lungs, but more of the right. There were very many cavities, some being filled with caseous matter, simply as if just transformed from tubercle, others containing more or less purulent matter. Some were quite large, with ragged sides, and filled with pus and mucus. Mucopurulent matter exuded from the lungs on section, extensive tracts not being aerated. Only a small portion of the lower lobes along the anterior edges crepitated normally on the right side, and the edges of both lower and upper of the left.

Examination of the larynx disclosed a large ulcer on the right side, at the posterior extremity of the vocal cord, ventricle, and false cords. It was quite deep, extending into the soft tissue above the cricoid cartilage. Anterior to the arytenoid it extended deep down towards the wing of the thyroid. It did not involve much of the cord, not cutting entirely across it, though a sinus ran in back of it. The outline was irregular, but the sides were pretty smooth. A spherical ulceration of the mucous membrane surrounded this, the whole being about the size of a five-cent piece. Of this, the ulcer proper occupied rather more than half.

Directly opposite this ulcer, at a corresponding point of the left side, was a still deeper ulcer, but not affecting the vocal cord by ulceration even of its mucous membrane.

It was in the ventricle, and was a mere slit in its long diameter, a third of an inch in length. It was on the line of the superior border of the cricoid cartilage posteriorly, extending back nearly to it. It could only be seen by separating the parts, being closed and invisible in a natural condition of the tissues. Extending

upward from it was a considerable superficial ulceration of the mucous membrane. The entire inner surface of the larynx was swollen, the cords, both true and false, being thickened so as to be hardly recognizable, and almost obliterating the ventricles. The anterior surface of the larynx was not so much affected, and the epiglottis was hardly at all thickened.

There was considerable œdema of the tissues between the cricoid and thyroid cartilages, probably induced by the ulcers extending deep into them.

In the trachea there were a few quite superficial ulcerations or erosions of the mucous membrane. In one point only, low down towards the bifurcation, there was one that appeared to go nearly down to the cartilage.

The heart and the abdominal organs were healthy.

A few words in regard to this somewhat rare affection may, perhaps, not be out of place. First, in regard to the propriety of the term "tubercular ulcer." It is a question in debate whether the morbid process by which these ulcers exist is really tubercular,—*i.e.*, whether they are due to the deposit of tubercle in the tissue, which, breaking down, causes a destruction of tissue, or whether they are simply the results of inflammatory action. Apart from any heterogeneous deposit, Virchow says tuberculous ulcers do actually originate from miliary tubercles. The absence of them so frequently, which leads other observers to deny altogether their presence in connection with ulcers, he explains by the perishable nature of these deposits. He asserts that he has found them himself.

Rindfleisch allows that they may be developed from tubercle, led to do so partly by the assertion of Virchow, and partly from having himself observed in microscopical sections vertically through ulcers, clusters of cells situated well below the surface, in the midst of connective tissue still intact, which remind him strongly in their behavior of miliary tubercles. "These tubercles, however," he says, "are so sparingly disseminated and appear so insignificant in comparison with the inflammatory infiltration of the ulcerated surface itself, that I would only regard them as a pledge of the connection of the morbid changes with constitutional tuberculosis. At most they could only be raised to the dignity of permanent inflammatory irritants." (New Sydenham Publications, vol. liv.)

Niemeyer seems to believe in the tubercular origin of these ulcers. He says the severity of the cough cannot account for them, for it is often more severe in mere bronchial affections. Neither for the same reason can they be said to originate from foul acrid secretions from large cavities.

Their anatomical appearance, too, as described by him, indicates this opinion. "We first observe," he says, "gray, round granules the size of a millet-seed, which turn yellow, soften, and disintegrate, leaving a small round ulcer.

"Fresh deposits in the vicinity occur, and the resulting ulcers run together, forming an irregularly-shaped loss of substance. More frequently, though, we first notice a yellowish discoloration, which the microscope shows to be an infiltration with small cells.

"The mucous membrane becomes relaxed, and a shallow ulcer follows, which may afterwards extend very deep."

Türk, of Vienna, whose authority in affections of the larynx is received with great respect throughout Germany, though he has now been dead several years, says that deposit of tubercle is not often the direct cause of these ulcers, yet that it is beyond a doubt that a certain number of them are due to it. The most common cause is catarrhal and follicular inflammation.

Cohen, of Philadelphia, is very doubtful as to tubercle being deposited here, and would regard the small white pin-head points described as miliary tubercle as,

in most cases, enlarged follicles. (Cohen, Diseases of the Throat, p. 357.)

Other observers utterly refuse to allow that tubercle is present or participates in these ulcers.

But it is not necessary to quote the opinions of a long list of authorities on this subject, which is of no great practical importance in the direct consideration of these ulcers. It has occurred to me, however, that it might be a good field to study tubercle itself, and might throw light on the now widely-discussed pathology of this heterologous formation.

The general opinion held by most of the best authorities seems to be that a limited number of the ulcers occurring in the larynx with phthisis are caused by a direct deposit of tubercular matter.

Ulcers may occur in the larynx from a variety of causes. Besides the one under consideration, there are those due to syphilis, to inflammation of the mucous membrane, either catarrhal or of the glands, to diphtheria, cancer, etc. The diagnosis of the ulcer of tuberculosis from all the rest is particularly desirable, inasmuch as the treatment is quite the opposite from most of them: while other ulcers may be made to heal only by severe treatment,—cauterization, perhaps,—these are to be let alone, or to be soothed by sedatives and protectives. But the appearance presents little that is characteristic, so far as I have been able to learn. Any of them may be superficial, or deep and extensive. There are, however, certain guides to a satisfactory conclusion.

The ulcers of cancer are accompanied by lancinating pain, the absence of which may exclude it, also the locality of the cancer-ulcer, which affects preferably the anterior portion of the larynx when affecting it alone.

The most common variety of cancer met with here, according to Rokitsky, is the epithelial, this being a favorite location for its development. The diagnosis lies mostly between it and syphilis, which it resembles more than other ulcers.

Between tubercular and syphilitic ulcers the diagnosis may be, in a measure, reached by the locality. Syphilis attacks most commonly the epiglottis, and hardly ever the vocal cords. Tubercular ulcers are found more at the posterior portions of the larynx, affecting the false and true cords, and the vestibule, rarely attacking the cartilages, and seldom attended with much œdema, both of which occur with syphilitic ulcers. Trousseau says that a dusky color of the membrane is diagnostic of syphilis. Aphonia is more complete in tubercular than in syphilitic ulcerations.

An ulcer seated on the posterior portions of the larynx, attended with only moderate œdema, causing more or less complete aphonia, lasting perhaps for a long time without producing great destruction of tissue, the pain of which is of moderate severity or but little noticed, and finally coexisting with phthisis of the lungs, may be called a tubercular ulcer. I think this is about a fair picture of it. Only a small portion of the cases of sore throat with phthisis are due to ulceration, the existence of which can only be made certain by the laryngoscope.

A word only in regard to treatment. I think but little is called for locally. The ulcers are very seldom of themselves the immediate cause of death, and probably only by opening into the œsophagus. Their tendency is, after advancing to a certain point, to remain stationary, producing but little serious inconvenience. Such is the result of my own limited observation of them. The general treatment of phthisis will, of course, be given. Locally, only such remedies are called for as will relieve them of irritation. Cough should be combated, as an evident irritant. Morphia is sometimes applied locally. Nitrate of silver in solution is said by Niemeyer to alleviate the cough, a bit of

sponge being dipped in it and squeezed over the entrance to the glottis. Cohen speaks of inhalations of carbolic acid; but I believe that when no great disturbance is caused by the ulcer no local treatment is called for; nothing but general building up of the system, which we always attempt to effect in consumption of the lungs.

GLEANINGS FROM OUR EXCHANGES.

INSTRUMENT FOR DETERMINING THE CALIBRE OF THE URETHRA AT ANY GIVEN POINT.—Dr. F. N. Otis, of New York, communicates to the London *Lancet*, July 11, a description of an instrument devised by himself and intended to serve as a gauge of the normal urethral calibre, and also to measure that of strictured portions of the tube. The instrument, a drawing of which accompanies Dr. O.'s communication, is practically a sound, having a gauge at its distal extremity and an indicator near the proximal or external end.

"It consists of a small straight canula (No. 8, F) terminating in a series of short metallic arms, hinged upon the canula and upon each other. At the distal extremity where they unite, a fine rod, running through the canula, is inserted. This rod (which is worked by a stationary screw in the handle of the instrument), when retracted, expands the arms into a bulb-like framework 10 mm. in circumference when closed, and capable of expansion up to 40 mm. A thin rubber stall drawn over the end of the closed instrument protects the urethra from injury, prevents access of secretions to the interior of the instrument when expanded, and completes the bulbous appearance of the dilating apparatus.

"When this instrument is introduced into the urethra and expanded up to a point recognized by the patient as comfortably filling his urethra, the hand on the dial will indicate the calibre of the canal at the point occupied by the bulb; moving this gently backwards and forwards, the tactile sense of the operator, by the aid of the screw at the handle, will give a fair knowledge of the capacity and condition of the presenting canal."

DEATH FROM CARIES AND DISLOCATION OF THE ODONTOID PROCESS (*Lancet*, July 11).—A post-mortem examination was made recently at St. Thomas's Hospital in the case of a patient, a young man, who had suffered for some months with soreness in the neck, accompanied by stiffness and difficulty of motion. Within the three weeks previous to his death he began to experience pain in the neck, especially on bending the head forward. This was followed shortly after by numbness in the left hand, and later, in the arms and legs with a pricking sensation. His breathing soon became difficult, his face blue, and he died on his way to the hospital.

At the post-mortem examination, on the body being opened, all the internal viscera were found to be quite healthy; and, on opening the skull, the brain was also found perfectly healthy; but, on close inspection of the interior of the skull, the odontoid process of the axis was found filling up the foramen magnum, having ruptured the check and the transverse ligaments, perforating the meninges of the cord, and pressing upon the spinal medulla. The lower part of the medulla oblongata at the seat of pressure was softened and pulpy, and a collection of matter had found its way between the membranes and the cord. The occipito-atloid articulation of the left side was carious and entirely disorganized, and occupied by an abscess cavity, which had probably burst at a point where the odontoid process had perforated the dura mater. The posterior part

of the anterior arch of the axis, as well as the anterior edge of the foramen magnum, was also carious.

ELIMINATION OF ALCOHOL.—In *The Practitioner* for July, Dr. Anstie gives the results of final experiments made by himself and Dr. Dupré, with the view of ascertaining as nearly as practicable whether alcohol to any appreciable extent escapes unchanged from the body of an animal which has ingested it. The animals chosen for experiment were dogs, which approach most nearly to man in their capacity for resisting the effects of alcohol. The experiments were performed by the aid of a Pettenkofer's chamber, in which the animal was confined, while a current of air passing through the box was condensed in water. By this means all its excretions could be obtained and analyzed.

The result of a series of these most carefully conducted experiments, including one where the entire animal was subjected to a sort of "destructive distillation," proves conclusively that within certain limits alcohol ingested by an animal becomes totally metamorphosed within the system, the percentage eliminated as such being almost inappreciable. Dr. Anstie concludes that quite six hundred grains of absolute alcohol can be disposed of daily within the organism of an adult male without any perceptible injurious effect upon the bodily functions.

If alcohol be a force-producing food, it is probably of great value in that capacity, on account of the rapidity with which its transformations take place.

It is certain, however, that beyond a certain dosage, varying for the individual, it becomes a violent narcotic poison, the more dangerous that it cannot be eliminated to any considerable extent.

If alcohol does not disappear by oxidation, it must undergo some as yet quite unknown transformation, after which it must escape unrecognized in the excretions.

If alcohol, however, be indeed oxidized, and yet does not beget force which can be used in the system, this would be the strangest possible discovery. Considering the very high theoretical force-value of the six hundred to eight hundred grains of absolute alcohol which millions of sober persons are taking every day, we may well be hopeless of any reasonable answer to the question, Why does not this large development of wholly useless force within the body produce some violent symptoms of disturbance?

CASE OF PHTHISIS WITH UNCONSCIOUSNESS FOR FIFTEEN MONTHS.—Dr. B. F. Scull reports, in a recent number of the *American Medical Weekly*, a case in which a man who had been suffering from severe bronchitis, with symptoms of incipient phthisis, for several months, fell into a condition resembling catalepsy. Although eating and drinking whatever was offered, he seemed entirely indifferent as to the character of the food, and wholly unconscious of his surroundings, of his condition, of what he was doing, or of what was being done for him. His fæces were passed into a diaper, and it was necessary to keep him cleansed without any co-operation on his part.

After remaining in this condition for some fifteen months, he suddenly recovered consciousness, but fell into a rapid decline and died a year later.

DEEP INJECTION OF CHLOROFORM FOR THE RELIEF OF TIC DOULOUREUX.—Dr. Roberts Bartholow communicates to *The Practitioner* (June, 1874) an account of several cases of this painful affection treated successfully by hypodermic injections of chloroform.

The infra-orbital branch of the nerve was the seat of the tic in the cases reported, and Dr. B.'s operation consisted in passing the needle under the upper lip in the direction of and near to the infra-orbital foramen, and

then injecting from ten to twenty minims of pure chloroform. Considerable pain at first ensues, followed by a feeling of numbness and anaesthesia of the parts into which the chloroform diffuses. A puffy swelling quickly forms at the site of the injection, and an induration which lasts for several days follows. One very severe case operated upon in this manner gained relief from one injection covering a period of months.

POISONING BY COAL-GAS.—Dr. William Taylor, in a communication published in the *Edinburgh Medical Journal* for July, gives a number of interesting cases of this form of poisoning, from his own practice and that of others, including quotations from a monograph by Dr. Tourdes, of Strasburg. From the latter Dr. Taylor quotes the following list of characteristics, with which his experience agrees:

Post-mortem characteristics of poisoning by coal-gas: 1, coagulation of the blood; 2, its deepened tinge; 3, extreme brilliancy of coloration of pulmonary tissue; 4, abundance and nature of froth in the air-passages; 5, intensity of cerebral congestion; 6, engorgement of vertebral nervous system and extravasation of coagulated blood in the spinal column; 7, vivacity of injection of the mucous surfaces at base of tongue; 8, occasional rose-colored patches on thighs.

The morbid phenomena accompanying the action of the gas are thus classified in the order in which they occur:

1, insidious invasion—premonitory symptoms of variable duration; 2, headache and vertigo; 3, nausea and vomiting; 4, affection of intellectual faculties, involving absolute loss of consciousness; 5, general debility, prostration of strength, partial paralysis, convulsions; 6, phenomena of asphyxia, appearing slowly, but complete and predominant during the last moments of life.

GALVANISM IN AMENORRHOEA.—Dr. Jas. Whittaker (*The Clinic*, July 25) relates a case of obstinate amenorrhoea occurring in an otherwise healthy female aged 22 years, in which, after all other means of relief had failed, the interrupted current from a battery of twelve elements induced the menstrual discharge. In applying the current, the positive electrode was placed over the fundus uteri externally, and the negative, a fine gold-pointed wire, was introduced within the cavity of the uterus.

TREATMENT OF ERYSIPELAS BY SUBCUTANEOUS INJECTION OF CARBOLIC ACID.—Dr. Aufrecht practised injections of carbolic acid in doses of 0.60 centigramme in ten cases. Not only were the erysipelatous swelling and redness rapidly dissipated, but the temperature, pulse, and general health were remarkably improved.—*Centralblatt*.

MISCELLANY.

FOUNDLINGS.—The proportion of foundlings in France is rather considerable, so much so that the Council General of the department of the Rhône offer a prize of \$400 for the best essay on Foundlings. The following points are simply recommended to authors, though the Council grant them full liberty. 1. Causes of the abandonment of children. (a) What are the results obtained by statistics? (b) Do social, political, and religious conditions act upon the number of foundlings? (c) Were children left to public mercy among the ancients? Can the time be fixed when the forsaking of children, exceptional in antiquity, took a great propor-

tion, and under what social and religious influence has such increase taken place? 2. By what measures could the number of foundlings be diminished? What becomes of them? Establish a parallel between the moral and physical conditions of foundlings and other children. 3. By what means could foundlings be morally and physically improved? How could mortality among them be diminished? And how could their ultimate fate be ameliorated? 4. Which is the best manner of taking care of them? What has been the result of the suppression of turn-stiles? And how should we view such suppression?

TO INCREASE THE ADHESIVENESS OF GUM ARABIC.—Concentrated solution of gum arabic as a mucilage possesses the disagreeable property, when spread upon printing or other paper not strongly sized, of penetrating them to transparency and in spite of this not making them adhere to other paper. Paper cannot be attached to common pasteboard, nor wood to wood. Paper pasted with mucilage on metallic surfaces usually falls off soon. The use of gum as cement for glass, porcelain, or earthenware, etc., is entirely impossible.

All these disadvantages of mucilage are remedied when an aqueous solution of sulphate of aluminium is added. For two hundred and fifty grammes of the concentrated gum solution (prepared with two parts of gum and five of water), two grammes of crystallized aluminium sulphate will suffice. This salt is dissolved in ten times its quantity of water, and mixed directly with the mucilage, which in this condition truly deserves the name of *vegetable glue*. Solution of alum serves the same purpose, but far less efficiently.—*Druggist's Circular and Chemical Gazette*.

NOTES AND QUERIES.

TO THE EDITOR OF THE PHILADELPHIA MEDICAL TIMES:

I see by your issue of July 25 that Dr. W. B. Atkinson claims priority over Dr. Bernardy in the use of *chloral hydrate* for the mitigation of *puerperal eclampsia*. He claims to have used chloral for this purpose in October, 1871. My partner, Dr. H. A. Schell, gave chloral to Mrs. Buck for *puerperal eclampsia* March 9, 1871. We subsequently gave it to Mrs. Sone, a primipara, for this purpose, September 26, 1871,—sixty-grain doses by enema till consciousness was restored, then gave twenty grains by the mouth every two or three hours as long as any nervousness remained. You will observe, therefore, that we have two cases anterior to the date of Dr. Atkinson's case in October.

Very respectfully,

H. B. MALONE, M.D.

GALLATIN, TENNESSEE, July 30, 1871.

OFFICIAL LIST

OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U.S. ARMY, FROM AUGUST 4 TO AUGUST 10, 1874, INCLUSIVE.

HARTSUFF, A., ASSISTANT-SURGEON.—Leave of absence extended twenty days. S. O. 57, Military Division of the Missouri, August 4, 1874.

WIGGIN, A. W., ASSISTANT-SURGEON.—Assigned to duty at Fort Stevens, Oregon. S. O. 98, Department of the Columbia, July 29, 1874.

WOODRUFF, E., ASSISTANT-SURGEON.—Leave of absence extended three months. S. O. 168, A.G.O., August 3, 1874.

McLAREN, A. N., SURGEON.—Died August 1, 1874, at Boston, Mass.

PHILADELPHIA MEDICAL TIMES.

SATURDAY, AUGUST 22, 1874.

ORIGINAL COMMUNICATIONS.

AN INVESTIGATION INTO THE ACTION OF VERATRUM VIRIDE UPON THE CIRCULATION.

BY H. C. WOOD, JR., M.D.,

ASSISTED BY JOS. BERENS, M.D.*

PART I.—VERATROIDIA.

Section A.—General Action of the Circulation.

AS is well known, some years since I published a physiological paper upon the alkaloids of veratrum viride. This paper, although correct so far as it went, was by no means complete in regard to the therapeutically most important portion of the subject. This lack of completeness arose from two sources. In the first place, the study was my first attempt at this sort of original work, and in the second place, my supply of the alkaloids was exhausted before the investigation was complete. Ever since, I have wished to carry out the work commenced, but have been unable to obtain more of the alkaloids until recently. As great stress has been laid in a certain quarter upon the fact that the alkaloids which were previously employed were not chemically pure, and as, in some of the experiments hereafter detailed, the poison used certainly was impure, a few words of introduction seem necessary. The researches of Bullock and of Mitchell appear to have positively determined that there are two alkaloids in veratrum viride, and only two. It is a comparatively easy task to separate these alkaloids from each other, but a most difficult if not an impossible one to free completely the separated alkaloids from adherent resin. This resin being inert is a chemical but *not a physiological* impurity, and therefore its presence in greater or less amount only affects the results of experiments in regard to the dose. The alkaloid containing twenty per cent. of resin must, of course, be given in doses twenty per cent. larger than the pure alkaloid, but, this being done, the results are identical. These facts rest upon experimental as well as chemical grounds, the purest alkaloid obtainable having produced, when given in proportionate dose, exactly the same symptoms as were caused by impure specimens.

In my first investigation the following experiments were made to test the action of veratroidia upon the circulation in the uninjured animal.

Experiment I.—(Exp. 18.)—A moderate-sized mongrel dog.

TIME.	DOSE.	PULSE.	PRESSURE.	REMARKS.
0	gr. 1	108	120-150	Pressure sometimes as low as 110, and as high as 160.
5		106	55-80	Into peritoneal cavity.
7				Pressure sometimes rises to 95. Vomiting. A convulsion.

* Dr. Wood took part in all experiments, and is responsible for their accuracy, as well as for the plan of the investigation and all deductions made. Dr. Berens did a full share of the experimental work.

TIME.	DOSE.	PULSE.	PRESSURE.	REMARKS.
10	m.			Dog apparently dead.
12	"	50	110-150	Several howling, laborious breaths, then quiet. The individual beats of heart very powerful, driving mercury through 40 m.
15	"	140	175-195	The breathing for the last five minutes has consisted of a few paroxysms of half a dozen convulsive respiratory efforts. The pressure has been as high as 210.
16	"	0	0	The mercury fell in the tube almost instantly. Dog dead. The autopsy showed brain and medulla congested with dark blood; right side of heart enormously congested and swollen; left side nearly normal; venous system everywhere gorged; blood very dark.

Experiment II.—(Exp. 19.)—Terrier dog.

TIME.	DOSE.	PULSE.	PRESSURE.	REMARKS.
0	gr. ½	112	120-160	Hypodermically.
5		112	120-160	
10		104	75-90	
15		84	75-90	
17				Dog vomiting violently.
20	"	68	90-105	Dog still vomiting. No purging or convulsions, but a slight twitching of muscles.
30		76	90-105	Some convulsive movements.
35			110-120	Dog quiet; not vomiting (hence, probably, arterial pressure increased).
40		96	70-90	Immediately after a severe paroxysm of vomiting.
40½			90-105	
40¾	"	115-120		Pressure rising sometimes to 125.
41		90-105		Directly after a violent opisthotonic convulsion, which has just ceased.
45		140	115-120	Dog quiet.
50		140	100-115	Rarely rising to 130.
53				Dog was unfastened, and pushed off the table; he fell relaxed and stone-like, but in a little while strove to get up, and, struggling violently, slowly progressed forward, scarcely lifting his belly off the ground. Upon being seized a few moments after, he had a violent convulsion, which was quickly followed by total unconsciousness; touching the eyeball producing no effect. Breathing had apparently ceased; pulse very feeble. After lying quiet for some time, he slowly returned to consciousness.
65	gr. ½	104	155-175	Dog breathing well again.
80		104	95-105	Dog has not moved for fifteen minutes.
				Injected into peritoneum. Dog showing no signs of life when struck or hit.
85			80-90	Going up to 100.
90				Vomiting.
95	"	108	105-115	
110		104	90-100	Dog now untied, and allowed to lie undisturbed. He died in a few minutes.

In commenting upon these experiments I used the following language: "The action of veratroidia upon the heart seems more difficult of interpretation. In Experiment 18 there was a marked depression in the force and rapidity of the blood-movement, lasting for ten minutes. At the end of this time death by asphyxia was rapidly produced, and the circulation underwent a curious change. The pulse, in a moment, was reduced to a mini-

mum in rapidity, but the individual beat became endowed with four times its normal force; the pulse then rapidly rose to one hundred and forty,—twenty beats beyond its pristine number; the individual heart-contractions becoming much more normal, but the arterial pressure rising far above what it had been previous to the administration of the drug. Then very rapidly the mercury fell, and in a moment the heart was stopped, and all was over.

“I think the most probable explanation of this curious phenomenon is to be looked for in the sudden cessation of the respiration, and the consequent rapid production of asphyxia. The increase in the force and rapidity of the heart’s action was most probably due to the overpowering of the specific action of the veratroidia by that of the carbonized blood. In his admirable ‘Physiological, Pathological, and Anatomical Researches’ (p. 33), Dr. Reid has a paper on the ‘Phenomena of Asphyxia,’ from which the following is extracted:

“ ‘When the animal was breathing freely through the tube in the trachea, was quiescent, and when the blood was fully arterialized, the range of level in the mercury in the tube seldom exceeded half an inch, sometimes not so much. When the stopcock was shut, no change took place in the range of the mercury during the first half-minute; generally before the end of the first minute the animal had begun to struggle, and the range greatly increased, rising during each attempt at expiration, and during the struggling of the animal. In some experiments the range of mercury amounted to about nine inches, and in one experiment to ten inches.

“ ‘In a third experiment, the pulse was 100 before the stopcock was turned; at the end of one minute the blood was getting dark, the animal was beginning to struggle, and the pulse was 120. During the second minute the animal struggled violently, and the pulse could not be reckoned. At the end of two and a half minutes the animal ceased to struggle, the respirations were few and heaving, and the pulse was 78.’

“In Experiment 19, the primary period of depression ended in a gradual increase in the frequency and force of the pulse, which had risen to 140 instead of 112 in a minute,—the number before its administration,—but had not quite regained the force which it had had previous to the use of the drug, when a period of collapse and apparent death came on; after reaction from this, however, the circulation more than regained the power which it had at first. A further dose of the veratroidia was followed by the same depression and subsequent rebound of the circulation. The indications do not, in this case, point so clearly to the accumulating carbonic acid as the cause of the secondary arterial excitement, but I cannot help believing it has something to do with the latter.”

In the present investigation, the first experiments with veratroidia were directed to discovering whether the effects obtained in the study of Mr. Bullock’s alkaloid are constant. These experiments are as follows:

Experiment III.—Small stout dog.

TIME.	DOSE.	PULSE.	PRESSURE.	REMARKS.
		140	110-115	Respiratory efforts frequent and deep, during which a maximum and minimum pressure was attained of 100-125. Injected into femoral vein.
0	gr. 1-40			
10			10	
30			0	
45				Pressure rising; the respiration profoundly affected; vomiting. Respiration ceased; the pulse very weak and quivering; blood very black. Respiration resumed.
1			140	
1¼			165	
1¾				
2			10	
3		114		Pulse very weak. Clot.
6		198	200	Pressure has been up to 210. Clot.
7				Pressure sometimes falling as low as 100, and rising to 145. The respiratory efforts three in a minute, and shallow and gasping in character.
11			115-130	Individual beat fifteen cent. Respirations but two to the minute.
12	gr. 1-40	100	90-110	Respirations but one to the minute. Into femoral vein. The pressure fell instantly.
21		84	80-85	
21¾				
21¾			40	
22¼			85	
22¾				
23¼			110-120	
26		165	95-100	Pressure rising to 115 and falling to 90. Respiration feeble and slow.
35				Heart instantly arrested. The organ was flabby; responded feebly to stimuli, and filled with black blood.
	gr. 3-40			

NOTE.—Some blood drawn from the femoral artery just previous to death was found exceedingly black and venous in character, but rapidly changed to a bright arterial hue after a few moments’ exposure to the air.

Experiment IV.—Moderate-sized dog.

TIME.	DOSE.	PULSE.	PRESSURE.	TEMP.	REMARKS.
		150	115-125	103½°	Breathing regular. Pressure sometimes falling to 100, and during strong respiratory effort rises to 145.
0	gr. 1-20				Injected subcutaneously.
7				102½°	Respiration begins to be affected.
17		60	50-75	102¼°	Individual beat 25 cent. Respirations deep; nine to the minute.
27					
28		42	48-65	101¾°	Efforts at vomiting.
30			25-40	100¾°	Dog has just vomited.
30¼			105-135		
30¾			125-150		Vomiting ceased.
30½			130-160		Respiration almost ceased. Pressure has been lower.
31			90-115		Respirations irregular; four to the minute.
32½	gr. 1-20				Clot. The tube inserted in vessel on opposite side.
34		36	60-95	100¼°	
38½					
43			50-60	99¾°	There is violent purging. Stools liquid and greenish. Arterial blood very black, and clots easily.
53		50	35-75	98½°	Breathing very slow. Pulse irregular. During respiratory effort pulse and pressure both rise, falling again in the respiratory interval.
58					
62				97°	Blood very dark. Injection has had little apparent effect.
63		gr. 3-20			In peritoneal cavity.

TIME.	DOSE.	PULSE.	PRESSURE.	TEMP.	REMARKS.
88 m.	gr. 3-20				No marked effect.
89 "					In peritoneal cavity.
91 "					Violent vomiting of greenish fluid. Breathing very rapid and irregular.
91½ "					Respirations slow and labored; dog struggling violently for breath. Blood drawn from femoral artery very black, but becomes bright red after exposure to air.
96 "					Dog dead. Heart large and flabby, but filled with dark blood. Alimentary canal much inflamed throughout.

Experiment V.—A very stout, large terrier.

TIME.	DOSE.	PULSE.	PRESSURE.	REMARKS.
0	gr. 1-40	120	110-120	All or nearly all of this dose was lost in attempting to inject into the femoral vein.
5 m.		120	115-122	
9 "		144	117-123	
11½ "	gr. 1-40		115-123	Injected into femoral vein. Respiration exceedingly affected; very labored. Vomiting freely. Respiration almost arrested. Arterial blood perfectly black. Deep respiration; paroxysms at very long intervals.
13 "			120-125	
16 "				
17½ "			10-15	Decided change in color of blood. Respiration becoming more frequent.
18½ "			85-110	
19½ "			95-120	
20 "			135	Respiration in paroxysms at long intervals. During intervals pressure falls to 60-70, but rises to 60-100 after inspiratory efforts.
21 "			180	
22 "			245	
23 "		18	160	Cut one pneumogastric.
25¼ "			90-100	
26 "		54	70-90	
27 "			65-97	Respiration very weak. Cut remaining pneumogastric.
30½ "			68-80	
32 "			130	
32½ "			95-105	Into femoral vein.
34 "			90-100	
34½ "			80-87	
35 "			95-100	Respiration very labored. Injected into femoral vein.
35½ "			115-122	
36 "			110-115	
37½ "			68-73	Efforts at vomiting. Pulse very rapid. Arterial blood very black.
52 "	gr. 1-40		40-43	
52½ "			35-40	
53¼ "			40-45	Vomiting of a large quantity of mucus of deep greenish tint —probably due to bile.
54 "	gr. 1-40		65-70	
54½ "			75-80	
55 "			90-95	
59 "			95-100	
63 "				

A careful study of these experiments will show their complete agreement with those of my previous study. In Experiment III., the blood-pressure, after the first injection into the vein, fell to zero in the course of thirty seconds, and in one and a quarter minutes had risen again to 165,—the original point having been 110; and similar phenomena were also witnessed after subsequent injections. In Experiment IV., the alkaloid was thrown not into a vein, but into the cellular tissue, and the succession of phenomena was therefore less rapid, and, accordingly, in closer accord with what occurred in the trials with Bullock's preparation. Seventeen minutes after the

injection the pressure was about one-half what it was originally, whilst thirteen minutes later it was more than one-fifth greater than normal,—a fall of one-half, a rise of one-fifth.

In Experiment V., the alkaloid was thrown directly into the circulation, and in one and a half minutes the pressure, which had been 120, was down to 10, but in three minutes had risen to 245. It is very plain that the fall and rise not only take place much more quickly when the drug is thrown directly into the veins, but are also much exaggerated. This fact would seem to indicate that the primary fall is due to a direct action of the alkaloid upon the heart or its nerve-supply, whilst the secondary rise has its source in some indirect action of the poison. A reference to the record of Experiment III. or of Experiment V. will show that the alkaloid produces an intense disturbance of the respiration, and that the secondary rise of the arterial pressure was simultaneous with, and proportionate to, this disturbance. In my previous article the great probability that the rise was simply due to the excess of carbonic acid in the blood was fully shown, and the remarks thereon have already been quoted. In order to test absolutely the matter, the alkaloid was administered, and forcible artificial respiration was kept up. Under these circumstances, as will be seen from the following records, the secondary rise of the mercury in the manometer was altogether prevented, the arterial pressure being steadily depressed. If the bellows were kept quiet for an instant, however, and the animal left to its own unaided powers, the blood commenced to grow dark, and the pressure to rise, only to fall at once when the artificial respiration was again resorted to. In experiments hereafter detailed, these results were repeatedly confirmed; and, although at times other results seemed to be achieved, it was always found that a leak in the bellows or some other accident or circumstance had interfered with the efficiency of the artificial respiration. The experiments are as follows:

Experiment VI.—A stout dog of medium size.

TIME.	DOSE.	PULSE.	PRESSURE.	REMARKS.
0	gr. 1-40		100-110	Grain one-sixth of woorari injected into femoral vein, and artificial respiration practised. Into femoral vein.
1-10 m.			15 80	
½ "		102		
2¼ "			100-110	Slight vomiting, efforts interfering somewhat with artificial respiration.
3 "			80-100	
8 "			30-45	
14 "		52		Individual beat 13 cent. Arterial blood bright scarlet.
17 "		60	30-45	

Experiment VII.—A stout young pup.

TIME.	DOSE.	PULSE.	PRESSURE.	REMARKS.
0 m.	gr. 1-40	130	90-100	Into femoral vein. Artificial respiration. Pressure was falling rapidly, when the blood clotted in the tube.
1-10 "				

TIME.	DOSE.	PULSE.	PRESSURE.	REMARKS.
3	m.		80-85	
6	"		75-80	
15	"		45-50	
16	"		50	
23	"		40-45	

Experiment VIII.—A moderate-sized dog.

TIME.	DOSE.	PULSE.	PRESSURE.	REMARKS.
		90	115-125	Artificial respiration applied very actively.
0	m. gr. 1-50		130-135	Injected into the femoral vein.
½	"		65-75	
1	"	44	60-75	
2	"		80-95	
4	"	60	80-105	
5	"		90-110	
6	"	60	95-110	
8	"	93	90-110	
10	"	90	85-95	
11½	gr. 1-40			Into femoral vein.
11¾	"			After injection, pressure fell at once to 70, but a clot prevented further observation of the fall.
18	"		50-58	
19	"	88	50-58	

As a contrast to these experiments, and as showing the influence an excess of carbonic acid in the blood has over the depression of the arterial pressure caused by veratroidia, the following experiment is recorded. Although thus reported separately, for obvious reasons, it was in truth a continuation of Experiment VII.

Experiment IX.—A stout young pup.

TIME.	DOSE.	PRESSURE.	REMARKS.
0	m. gr. 1-40		Into femoral vein.
23	"	40-45	Cut pneumogastrics.
52	gr. 1-40	50-60	Into femoral vein. Artificial respiration suspended.
55	"	135	
56	"	145-170	
56½	"	210	Dog making violent respiratory efforts.
61	"	130-135	Blood black. Artificial respiration resumed.
61¼	"	55-60	

(To be continued.)

A CASE OF CARIES (?) OF THE VERTEBRÆ COINCIDENT WITH CANCER OF THE VISCERA.

BY H. C. HAND, M.D.

J. B., a native of Sweden, single, temperate, and a laborer, was attacked in the autumn of 1873 with pain in the region of the left hip. The pain increased in severity, and when he was first seen (Feb. 2, 1874) it was accompanied by considerable difficulty in locomotion. There was some tenderness on pressure in the groin, and about the same when pressure was applied over the sciatic nerve on the level of the great trochanter. No pain was excited by motion of the hip-joint, nor by driving the head of the femur against the acetabulum by sharp blows on the knee or heel. Soon he began to refer the pain to his knee, especially at one point over the inner condyle, and with this he suffered

almost as much as with the pain nearer the trunk. The left leg and thigh became daily more and more flexed, until at the time of his death the heel almost rested against the nates. During the last month of his life the right hip and thigh also became painful and flexed, but in a less degree than the left. He rarely complained of pain in his back, except when he lay in an uncomfortable position or when he was moved. On pressure there was some tenderness over the lower dorsal and the lumbar vertebræ, but this tenderness was not greater in degree than that found on each side of the spine over the lumbar muscles, and upon the ribs as high as the angle of the scapula. There was no projection of any of the spinous processes. He coughed a little, and occasionally raised some clots of blood.

About the 1st of February he noticed a small tumor under and in contact with the malar bone. This steadily increased in size until the time of his death, when it was as large as a walnut. It never gave him much pain. His appetite was always very poor; bowels constipated. He lost flesh and strength day by day, his skin became shrunken and inelastic, his complexion sallow and cachectic, and he died June 5, 1874. It should be observed that there was no bronzing nor other dark discoloration of the skin; its color was typically that which ordinarily accompanies the cancerous cachexia.

An *autopsy* was made thirty-six hours after death, by Dr. C. E. Smith and myself. The body was much emaciated. Both legs were extended and equal in length. As he lay on his back, the pelvis was inclined to the left side; it was easily straightened or even inclined to the other side, but resumed its original position by a hinge-like movement in the spine as soon as left free. On opening the cavity of the abdomen, the first thing attracting attention was the prominence of the lumbar vertebræ; in fact, this prominence was easily recognized during life through the thin abdominal wall. The point at which so free motion existed between the upper and lower halves of the body was at the second lumbar vertebra. The bony structure of the body of this bone had almost entirely disappeared, leaving some spiculæ only, the remainder of the space for the body being occupied, but not extended, by a bloody puruloid liquid. The bodies of all the other lumbar vertebræ were softened to such an extent that a scalpel could be readily thrust into them, causing the escape of a few drops of the bloody puruloid liquid mentioned above. The lower dorsal vertebræ partook of the same changes in a less degree. The lower lumbar vertebræ were very prominent, as before noted; so much so that the sacrum receded from them at almost a right angle. The breadth of the bodies of these vertebræ also seemed increased, being at least three inches, and probably more.

Some of the mesenteric glands were enlarged, but not greatly, and in two or three a few drops of pus had formed.

The kidneys were flabby and somewhat enlarged. Dispersed throughout their substance were numerous nodules, varying in size from a pea to a hazel-nut. These were round, well defined, more resisting than

the surrounding tissue, and on section showed a whitish and uniform structure.

The supra-renal capsules were each large and firm. The left weighed one ounce, the right two ounces. The whole interior of these organs seemed to have been replaced by a new formation of about the same consistence as the nodules in the kidneys. The color of this formation was grayish-white, its gross appearance slightly granular.

The liver was congested and dark. Round nodules, from the size of a white mustard-seed to a pea, were scattered throughout its tissue.

The spleen was double its average size. Its interior was like currant-jelly. No adventitious deposits were found in it.

The right pleural cavity contained about one quart of serum, by which, and adhesions at upper part, the lung was much compressed. No miliary tubercles and no cavities were found in it, but several nodules resembling in size, shape, color, and consistence those in the kidneys. One the size of a pea was found in the upper lobe of left lung; otherwise this lung appeared natural.

In attempting the removal of the tumor of the cheek, it was found to have involved the outer and anterior wall of the antrum. That part not blended with the bone was removed. Its size was about one inch by three-fourths of an inch in diameter. It was exceedingly hard and dense, and gave a creaking sound when cut. Its section was white, and exuded a little milky juice.

The microscopical characters of this cheek-tumor were—a fibrous stroma, cells of various shapes and sizes, the smaller ones containing one large nucleus, the larger ones several large nuclei; many of the smaller cells being elongated and spindle-shaped, more caudate; and finally, abundant free nuclei. Except the fibrous stroma, the new formation in the supra-renal capsules presented the same characters. The nodules in the kidneys had undergone degeneration to such an extent that the only microscopical appearances were multitudes of free granules and large many-shaped cells *filled* with granules. The same was also true of the nodules in the lung.

The above-named microscopical appearances were observed both by Dr. C. H. Boardman and myself, and, taken in connection with the general characters of the tumors, leave no doubt as to their cancerous nature.

The question of chief interest is that regarding the nature of the vertebral disease, whether it was a simple caries or a cancerous degeneration. Nothing but the comparative rarity of cancer, I think, would make us incline towards caries, and I believe that in regarding it as cancer we shall approach most nearly the truth.

The authors whom I have consulted in investigating the subject are either silent or eminently unsatisfactory. This little paragraph in Rindfleisch's "Pathological Histology" comes perhaps as near to the point as any: "A third, more rare, but so much the more characteristic form, is the diffuse carcinosis of the pelvic and adjacent vertebral bones, which presents itself clinically as an osteomalacia."

ST. PAUL, MINN., June 20, 1874.

TREATMENT OF CYSTIC GOITRE BY EVACUATION AND INJECTION OF THE SOLUTION OF THE PERCHLORIDE OF IRON.

BY J. EWING MEARS, M.D.,

Surgeon to the St. Mary's Hospital.

IN the London *Lancet* of May 11, 1872, Dr. Moirell Mackenzie reported a number of cases of cystic bronchocele which he had treated with eminent success by tapping and injecting with the solution of the perchloride of iron. As stated in the article, the cysts, by this method of treatment, were converted into chronic abscesses, and it was only necessary to conduct these to a termination in order to effect the cure of the bronchocele. The operation is exceedingly simple, and is described as follows. The cyst is first emptied, the trocar being introduced at its most dependent point, through the canula, which is allowed to remain; a drachm or more (the quantity being determined by the size of the cyst) of the solution of the perchloride of iron is injected, and the opening of the canula closed by a piece of cork or wood, cut to the proper size. The solution of iron is permitted to remain in the cyst for three or four days, according to the degree of inflammation which it is thought necessary to produce. At the end of the prescribed time it is withdrawn, the canula, with the opening closed, being retained in position. Poultices of linseed meal are now applied over the cyst, and when suppuration is fully established the plug in the canula is removed, and free drainage is secured. The canula is not removed until the discharge is limited in amount and its consistence such as to permit its easy exit through the wound. The duration of treatment was reported to vary from three weeks to four months.

Having under my care, at the time of reading this article, a patient who was suffering from bronchocele, I determined to treat it according to the plan so successfully employed by Dr. Mackenzie. Although I was not able, as will be seen, to follow to the letter the instructions given, still the success was complete, and I feel it a duty to report the case which so entirely confirms the plan of Dr. Mackenzie. It gives to the surgeon a method of treatment in these cases, which is at once simple and devoid of danger.

The patient, a female, aged twenty-eight years, first noticed the tumor in the neck some twelve years ago. Its growth had been very slow, and for a period of four years it seemed to remain stationary. During the last year it had enlarged in size until it produced quite a deformity, and at times interfered with swallowing. It was, at the time of operation, the size of a large-sized hen's-egg, being developed rather more to the left of the median line of the neck. It was freely movable, rising and falling with the movements of the larynx and trachea in deglutition. Various plans of treatment had been employed to effect its removal. I had already tried simple tapping and the internal administration of sorbefacient remedies, with also local applications.

Owing to the failure to obtain the proper form of trocar and canula, I was unable to secure the latter in the cyst after I had tapped it, and injected a drachm of the solution of the perchloride of iron. The injection was, however, entirely retained by the closure of the puncture made by the small trocar. On the third day symptoms of inflammation appeared, and the neck was quite swollen; slight febrile movement was also present. On the fourth day I reopened the cyst, from which there escaped a small quantity of a viscid, tarry substance. Poul-tices were now applied, and in a few days suppuration was established, the pus escaping through the puncture, which was kept open by the use of the probe. In six weeks the discharge ceased and the opening closed, leaving but a slight swelling over the site of the tumor. Three months after, when I saw the patient, this swelling had disappeared, and a small cicatrix marked the position of the cyst.

Dr. Mackenzie has reported to the Clinical Society of London the results of this plan of treatment in sixty-eight cases of cystic goitre and nineteen of the fibro-cystic variety. Of the cystic form fifty-four were cured, eleven did not require treatment, and three were in subjects on whom, by reason of cardiac disease, it was thought undesirable to operate. The results in the fibro-cystic varieties were equally favorable. The advantages of this plan of treatment are set forth in several clearly-stated conclusions, at which Dr. M. had arrived from a study of his cases. The hæmostatic property of the iron is alluded to as of value in these cases. The frequent occurrence of sloughing after the injection of iodine renders this remedy dangerous, and it should therefore not be employed.

TRANSLATIONS.

DOES CHLORAL INTRODUCED INTO THE SYSTEM PRODUCE PHYSIOLOGICAL EFFECTS SIMILAR TO THOSE OF CHLOROFORM?—The *Gazette Méd. de Paris*, July 11, contains a discussion of this question by the editor apropos to certain proceedings in the Académie de Médecine. In the Academy, M. Colin, who had been advocating the use of intravenous injections of chloral, was asked whether this substance is or is not converted into chloroform in the blood, and, if the former is the case, what advantage can possibly accrue from the administration of chloroform by this means over inhalation as usually employed. To this question no reply was given, seeming to indicate that the action of the two substances in the economy was assumed by the Academicians present to be identical.

To this view Dr. Laborde, the writer of the article in the *Gazette*, takes vigorous exception. It is difficult, he thinks, to understand how any physiologist who has experimented with chloral can admit that this substance comports itself in the organism like chloroform. The phenomena which constitute the essential features of this difference are as follows. The period of excitement which is habitual in chloroform-inhalation does not exist after the administration of chloral. Experiment shows that this difference is not due to the method of administration, since chloroform injected into the

veins or introduced into the stomach or rectum is followed by the same excitation as that which occurs subsequently to inhalation.

Chloral, as is known, produces sleep rapidly, while the anæsthesia which follows the sleep is not well marked or persistent until a further and sufficient dose has been administered. Once obtained, the anæsthesia, like the slumber, is quite prolonged, and both continue for an equal period. The persistence of sleep and anæsthesia may be more or less long, but they are always longer than the same effects when produced by chloroform.

On the other hand, with chloroform the anæsthetic effect dominates the properly hypnotic effect, and the first may be established and persist without the second having been produced. Every surgeon knows that there are certain patients in whom slumber can be produced by means of chloroform only with difficulty, while a sufficiently anæsthetic effect may be brought about without much trouble.

The sleep produced by chloroform is usually uneasy, disturbed, and full of dreams, while that brought about by chloral is calm and peaceful.

What is most characteristic, however, in the differences between the respective actions of chloral and chloroform is, on the one hand, the mode of awakening, and on the other the consecutive phenomena. The animal or man who has been under the effect of chloral awakes as if from a natural slumber. It is hardly necessary to say that this is far from being the case in slumber or anæsthesia produced by chloroform.

Although a certain proportion of chloral introduced into the blood may be converted into chloroform, yet the fact that in injections, etc., of chloral, the breath, the blood, etc., smell of chloral and not of chloroform, shows that much of this substance remains unchanged. M. Laborde does not believe in the intravenous injection of chloral, which, if introduced in concentrated doses, leads, he thinks, to local trouble, and if introduced in diluted solutions, exposes the patient to greater danger from the necessarily repeated operations.

A. V. H.

RENAL CONGESTION AND APOPLEXY; THEIR RELATIONS WITH CEREBRAL HEMORRHAGE.—Dr. Aug. Ollivier, in the *Archives Générales* for February, 1874, communicates a series of observations on this subject, including, 1, hospital cases; 2, physiological experiments. Under the first head Dr. O. gives careful notes of four cases of cerebral apoplexy, with autopsies. Under the second division he details a series of experiments practised upon rabbits, including irritations and incisions in the floor of the fourth ventricle, various parts of the hemispheres, the origin of the right acoustic nerve, etc.

The object of these experiments was to reproduce, as far as possible, the conditions found in hemorrhage into various parts of the brain. The results of the physiological research coincided with the clinical observations, and Dr. O. remarks that according to these facts albuminuria may be observed not only in hemorrhage of the pons, but also in hemorrhage into other parts of the encephalon. Dr. Ollivier concludes that albuminuria of cerebral origin is more frequent than up to this time has been supposed. In the present state of science it is impossible to fix with precision from the existence of this symptom the seat of a hemorrhagic clot, while in a case where the signs of a lesion of the pons are wanting in an apoplectic, one may say that the presence of albumen in the urine indicates either a clot at the base of the encephalon or an extensive hemorrhage compromising this base. In either case it constitutes a prognostic sign of great gravity.

A. V. H.

PROGRESSIVE PERNICIOUS ANÆMIA.—Under this title Prof. H. Immermann describes (*Deutsches Archiv für Klin. Med.*, 13ten Bd. 3tes Heft, 1874) three cases of a peculiar affection first alluded to by Biermer in 1872. Prof. I.'s cases are given at length and with most careful details. From the remarks he makes on the affection we extract the following conclusions:

1. There is a peculiar form of a high grade of anæmia which is distinguished by a progressively pernicious course, and appears almost invariably to terminate fatally.

2. This affection is to be distinguished from chlorosis, leucæmia, and other pathological processes as a peculiar form of disease, to denote which the name given by Biermer appears most convenient.

3. The etiology of this disease is obscure, since although we know certain aiding and abetting causes, we do not understand the essential (perhaps specific?) one; the geographical distribution of the affection displays interesting variations.

4. The peculiar symptoms of the disease during life, as well as the anatomical changes observed subsequently, indicate it generally as the result of blood-alterations, which the essential and primary disturbance in this affection establishes. The pathogenesis, however, of this excessive anæmia is not clear, since it may be due either to a diminished formation of the constituents of the blood or their rapid destruction, one or the other of which would lead to a similar result.

A. V. H.

THERAPEUTIC NOTES.

CURE OF IN-GROWING TOE-NAIL.—Dr. Ozanam (*L'Abeille Méd.*, July 6) regards the surgical operation at present commonly resorted to for the relief of this affection as needlessly cruel. The tearing out of the nail, or portions of it, leaves the toe in a tender condition for a long time, sometimes permanently. The plan which Dr. O. suggests as a substitute is as follows. A nick is made in the centre of the edge of the nail, extending in to its attachment. Then the upper surface of the nail is scraped along the middle line until it is thinned nearly down to the quick. A small piece of sheet-rubber is afterwards inserted on either side of the nail with the aid of a spatula, so as to form a sort of gutter around the edge, and to separate it from the adjoining flesh.

Dr. O. lays great stress upon this part of the treatment, and in particular upon the employment of rubber. Lead, he remarks, is too hard, charpie too soft and yielding, while the elasticity of the rubber on the one hand and its comparative softness on the other serve to keep up a constant but gentle pressure on the inflamed tissues without giving undue pain. Thus, with the elastic pressing up the outer edges of the nail and the thinness of its centre allowing a certain amount of yielding, it gradually becomes flatter, and its edges cease pressing upon the adjoining flesh. Should fungous granulations exist about the in-growing edges of the nail, it will be proper to apply some alterant, and the best for this purpose is powdered nitrate of lead, which reduces the fungosities and rapidly arrests suppuration. After the condition of the nail is once remedied, it is necessary to keep the central portion scraped thin for some months, until it becomes flatter and assumes a more normal form.

MERCURIAL INUNCTIONS IN SYPHILIS.—M. Panas (*Jour. de Méd. et Chirurgie prat.*) remarks that the sole objection to the use of mercury in this manner is the exposure to stomatitis and local irritative eruptions of the skin. To prevent the former, M. Panas recom-

mends the use of astringent dentifrice powders from the beginning of the treatment, with watchful care of the teeth. One or two vapor-baths should also be administered to the patient daily. The use of tobacco should be discontinued as far as possible. It is principally in the graver forms of the disease that this treatment is found applicable,—when the nervous system and bones have been attacked. In these cases the most unhopd-for success is occasionally obtained. In new-born syphilitic children mercurial frictions should be used exclusively. M. Panas makes use of the ordinary mercurial ointment, to the amount of one to two drachms daily. The frictions are made in the evening before retiring, and should be continued for five minutes or so, over a limited portion of the body. They may be kept up for a month or six weeks, and may be recommenced if any new signs of the disease should appear.

TANNATE OF QUININE IN CHRONIC ALBUMINURIA.—Bouchardat (*L'Abeille Méd.*, July 6) says, "I am in the habit of employing the sulphate of quinine in chronic albuminuria according to the method of Dr. Devouves, and occasionally with unhopd-for success. The dose I employ is eight grains, in a cup of strong coffee, three times a day. This is continued for six days, and at the end of that time scammony or some similar purgative is administered. After one or two days of rest the patient is again placed on the use of quinine; and I have frequently continued this treatment for more than a year. The food of course should, during this treatment, be highly nutritious. Lately I have been substituting the tannate of quinine for the sulphate, in doses of ten to twenty grains, three times in twenty-four hours, given in a similar manner. The digestive apparatus supports the tannate better than the sulphate."

INJECTION OF CHLORAL INTO THE TRACHEA.—At a recent meeting of the Société de Biologie, M. de Bellesme suggested the introduction of chloral into the system by this means in cases where the circulatory and absorbent functions are almost in abeyance, and where therefore subcutaneous or intravenous injections cannot be practised with reasonable hope of success. The process simply consists in inserting the needle of a hypodermic syringe into the trachea, at a point about one finger's-breadth below the cricoid cartilage, and slowly injecting the solution, which can be used in much larger quantities than by the subcutaneous method. This method is likely to prove serviceable in tetanus, hydrophobia, and the algid stage of cholera.—*Le Progrès Médical*, May 23.

BLENNORRHAGIC EPIDIDYMITIS.—M. Richert never uses leeches to the root of the penis, and rejects absolutely collodion strips for the scrotum, which cannot be removed without giving great pain to the patient. He also rarely has recourse to puncture of the tunica vaginalis. Repose in bed, position of the scrotum, which should be well kept up by means of a rubber or linen support, and the application of resolvent compresses, lead-water, or even cold water alone, serve to effect a cure.

ANTISPASMODIC PILLS.—

R Pulv. assafetidæ,
Pulv. camphoræ, aa ʒvj;
Ext. belladonnæ, ʒii;
Pulv. opii, ʒi;
Syrupi, q. s.—M.

Ft. in pil. No. clxxx.

One to be taken the first day, two the second, and so on until six are taken daily, or two three times a day. Useful in hysterical and spasmodic nervous affections, in connection with bromide of potassium in doses of ten to fifteen grains.

PHILADELPHIA MEDICAL TIMES.

A WEEKLY JOURNAL OF

MEDICAL AND SURGICAL SCIENCE.

The Philadelphia Medical Times is an independent journal, devoted to no ends or interests whatever but those common to all who cultivate the science of medicine. Its columns are open to all those who wish to express their views on any subject coming within its legitimate sphere.

We invite contributions, reports of cases, notes and queries, medical news, and whatever may tend to increase the value of our pages.

All communications must bear the name of the sender (whether the name is to be published or not), and should be addressed to Editor Philadelphia Medical Times, care of the Publishers.

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SATURDAY, AUGUST 22, 1874.

EDITORIAL.

AN INTERNATIONAL CODEX.

A REVIEWER of the United States Pharmacopœia, in the *British and Foreign Medico-Chirurgical Review* for January, 1874, made a proposition which has not, according to our thinking, attracted the notice which it deserves. Indeed, the only response which it has elicited is an article from the pen of Dr. Charles H. Thomas, published in the *American Journal of Pharmacy*, and commented upon by the editor of that journal. The proposition made by our British confrère is that instead of England and the United States having each their own peculiar Pharmacopœia, an international one shall be prepared and be received as the sole standard authority in both countries. The advantages to be derived from this fusion are very obvious. Any measure which tends to unite the two countries more closely together is indeed just so far advantageous to both; but, leaving out of sight such generalities, it is evident that much specific good would accrue from the proposed change. The literature of the two countries is to-day almost a common one, and is continually interfusing more and more completely; the intercourse by travel for pleasure and business is incessant and profuse; commercial relations are daily increasing in strength and number. Without occupying more space with details, these considerations or hints are sufficient to show the importance of the proposed unification, and it is only necessary to say a few words in regard to the present disunity.

This is the more imperative since no less an authority than Prof. Maisch has expressed an opinion so worded as to give the impression that the two Pharmacopœias are practically identical. The mere fact that the fundamental weights and measures are different in the two Pharmacopœias, the United States codex using apothecaries' weight and wine measure, the British standard employing avoirdupois weight and imperial measure, is sufficient to prove the diversity of the two. Taking, however, Prof. Maisch's own tables, we find that the tincture of aconite root is more than, and the tinctures of hyoscyamus, of nux vomica, and of cantharides are nearly, three times as strong in the United States as in the British Pharmacopœia. Surely, without occupying more space, these few data are sufficient to show the differences between the two standards; any points of agreement only render the assimilation of the two Pharmacopœias more easy.

The chief intrinsic obstacle to the unifying of the two standards is the diverse systems of weights and measures. This difficulty is readily met by banishing weights and measures altogether from the Pharmacopœia, and using in the formulæ "parts by weight." Indeed, at the late convention for the revision of the United States Pharmacopœia, the acting committee were directed so to prepare the formulæ in the edition of our national standard just published; but the autocratic gentlemen who were intrusted with the behests of the convention have deemed fit to disregard entirely the wishes and directions of those who appointed them; so that the Pharmacopœia appears in the old lumbering style.

The chief practical difficulty in effecting the desired unification is to be found in getting the machinery at work. Fortunately, at the late convention the revising committee was made perpetual, so that it can at any time be got together if an emergency should arise. This committee is, however, so conservative in its composition that no originating movement is to be expected from it: indeed, if it should heartily respond to a summons, it would do more than seems at present probable. The surest and most practicable method of bringing about the desired change would be for the English authorities to make advances to this committee, which undoubtedly has the right to make whatever alterations in our standard it chooses, and could, if it would, enter actively upon the work of unification.

It is, however, not very probable that the Old World will see fit to come to the New: the natural but false pride of seniority is against it, so that

some other way of getting at the matter must be devised. The only plan which appears plausible is for the American Medical Association at their next meeting to appoint, with power to act, a committee, which shall attend the following meeting of the British Medical Association and ask for the selection of a committee of conference, the two committees to form a joint commission to arrange the details for the actual performance of the work. This plan seems to us perfectly practicable, provided that sufficient enthusiasm can be awakened and sufficient judgment be exercised to get the right men to agree to serve and to be appointed upon the first committees.

Some provision should also be made by which this committee should be completely *en rapport* with the existing committee upon the revision of our standard, and with the pharmacutists of the country as represented in their national association.

CORRESPONDENCE.

MASSAGE EXTRAORDINARY! A CANINE SURGEON.

TO THE EDITOR OF THE PHILADELPHIA MEDICAL TIMES:

"A MOST remarkable instance of sagacity and animal reasoning took place yesterday afternoon at the residence of Whitfield Crawford, southeast corner of Seventh and Madison Streets, in this city. The principal actors in the case were a large dog belonging to Mr. Crawford, of the St. Bernard and Newfoundland breed, about two years old, who readily answers to the name of Carlo, and an ordinary domestic house-cat named 'Dick.' Between the two a strong feeling of friendship has always existed, each sharing the other's meals, and at night Dick, appreciating a soft bed, always found it by lying upon the top of his good-natured friend Carlo.

"On Wednesday last, on Mr. Crawford's return from market, he cut a piece of fresh meat into small pieces for Dick, but accidentally a needle and thread lying close by got mixed up with the meat. This poor Dick swallowed, or attempted to swallow, with the meat, but, not succeeding, the needle stuck in his throat, from which cause he of course suffered intensely, and in his sufferings he had the entire sympathies of his friend Carlo. Like a skilful physician, Carlo set about discovering the seat of the disease, which he found existed in Dick's neck.

"After an apparent consultation between the two, one as patient, the other as doctor, Carlo commenced operations by licking Dick's neck, the cat holding its head to one side to give Carlo a fair chance. The licking operation continued all day on Thursday, and at intervals through the night, Carlo occasionally pausing to press his tongue against the neck of his feline friend, as if trying to force some sharp-pointed instrument on the inside through the cat's neck to the outside. Yesterday, the same operation was continued by Carlo, until about four o'clock, when he was seen, with his whole body quivering with excitement, trying to catch something with his teeth, in which he succeeded, and giving a sudden jerk he pulled the needle through the hide of the cat, where it hung by the thread which still

held it from the inside. The remainder of the operation was performed by a daughter of Mr. Crawford, who pulled the thread through and stuck the needle in the fence close by. The joy of Carlo knew no bounds, and, frisking his bushy tail about, and rubbing his shaggy sides against his master, he showed his full knowledge of what he had done by going to the cat and licking the wound in the neck, and then to the needle in the fence, which he examined very minutely, saying, in actions almost as plain as words, 'See what I did.' A son of Mr. Crawford coming home from his labor was met by Carlo, who turned and ran to where the needle was, and smelled it as if to explain the case more fully to the new-comer."

"Go to the ant, thou sluggard!" says the wise man, to inculcate a lesson of diligence. "Go to the dog, thou stupid!" we may say to the surgeon, who on a similar emergency to the one recorded above would undoubtedly have attempted to remove the foreign body by its avenue of entrance. Apart from the wonderful interest of the story as witnessing to the animal's sagacity or reasoning powers, it is a remarkable tribute to the surgical possibilities of manipulation,* pure and simple,—a veritable triumph for the movement-cure. It also indicates a mode of procedure for the extraction of a needle from the œsophagus which is entirely free from the danger of laceration so often produced by our blind and bungling and more violent efforts. I will simply add that I have taken pains to verify the relation, and have had the extreme pleasure of taking "Carlo's" paw and giving him the salutation of a confrère.

He is a huge specimen even of those large species, while the kitten is but half grown. The wound is directly in the median line, and at a point which in the human being would be about opposite the root of the tongue. As there is no evidence of escape of air from it, I conclude that it passed immediately over the epiglottis. It is a round hole, the twelfth of an inch in diameter, suppurating, but with very little inflammatory action around it. The skin is denuded of hair for about half an inch around. The kitten is evidently "a sick child." This is the third day since the operation, and the first day that it has been able to eat. It, however, "takes more notice," and I think a favorable prognosis may be ventured on.

Dr. "Carlo" appeared to agree with me in this view of the case. The extract is from the *Wilmington Commercial* of this evening.

BENJAMIN LEE.

1503 SPRUCE STREET, PHILADELPHIA, August 1, 1874.

ETHER AS AN ANTHELMINTIC.—Prof. Vogel announces a new application of this anæsthetic, namely, the destruction of tape-worms. The ether is enclosed in a gelatin capsule and swallowed. It soon becomes vaporized in the stomach, (?) and the worm, then becoming stupefied, is easily removed by any of the usual remedies, against which, when awake, it offers strong resistance!—*Journal of Applied Chemistry*, August, 1874.

* Carlo's tongue was simply his substitute for a hand.

PROCEEDINGS OF SOCIETIES.

PATHOLOGICAL SOCIETY OF PHILADELPHIA.

THURSDAY EVENING, JUNE 25, 1874.

THE PRESIDENT, DR. WM. PEPPER, in the chair.

DR. DE F. WILLARD presented the specimens from a case of *tubercular phthisis, with cavities, ulceration of intestines, and cystic kidneys*, from Mrs. A. B., æt. 68, admitted to the Presbyterian Hospital with a history of long-standing cough and diarrhœa. She was supposed, some years since, to have an ulcer of the stomach, but nothing further is known in regard to her history. On admission she had abundant expectoration and frequent, profuse, and offensive stools, and sank rapidly.

Autopsy, twelve hours after death.—Body in ice; amount of rigor mortis consequently uncertain.

Body emaciated.

Right lung.—Small cavity at apex. Lung filled throughout entire extent with patches of miliary tubercles. Softening taking place at several points.

Left lung.—Apex occupied by a large cavity, containing an ounce of purulent fluid. At numerous points in both upper and lower lobes small cavities were encountered, while scattered through all the substance of both these lobes were abundant tuberculous spots of the miliary variety. Both apices firmly adherent to parietal layer of pleura. Small excess of fluid in pleural cavity.

Stomach.—Near the pylorus was found an ulcer three-quarters of an inch in length by one-half of an inch in breadth, extending through the mucous membrane into the submucous tissue. The edges were steep, and the base occupied by a dark material resembling ecchymosed blood.

Intestines.—From the duodenum to the rectum there were from one hundred to one hundred and fifty ulcers, of size varying from that of a pin's head to an inch in diameter, and presenting various stages of ulceration and healing action. Some were apparently entirely healed, and in their cicatrization had so drawn upon the mucous membrane that it presented a peculiar appearance, with folds radiating from their centres in every direction, the membrane being puckered longitudinally, transversely, and obliquely.

These ulcers were most numerous in the lower portion of the ileum, the cæcum, and the ascending colon, but were quite abundant in every portion of both small and large intestines.

Liver.—No abscesses or other abnormal appearances.

Spleen.—Also normal.

Kidneys.—Right: hypertrophied, but normal relation preserved between the cortical and medullary portions. Left: densely indurated, and with the capsule so adherent to the surrounding fat that it was removed only with great difficulty.

The secretory substance was apparently entirely destroyed, and its place occupied by six or seven cysts, containing a thick, purulent fluid. One cyst, near the upper end, was filled with a peculiar, white, pasty, and nearly solid substance, which resembled plaster of Paris when prepared for making casts, but was unctuous and smooth. The nature of this has not yet been determined by the microscope, but will be at the first opportunity.

The PRESIDENT desired an expression from the members as to the state of the kidney.

Dr. JAMES TYSON remarked that he thought no opinion could be given with regard to changes in the structure of the chief portion of the kidney without microscopic examination. He was, however, quite familiar with cysts of the kind found in this kidney.

The white, pasty matter is undoubtedly fat in a state of extreme comminution, in other words, *emulsified*, as would doubtless appear on microscopic examination. Its source has been most probably similar to the same matter found in ovarian tumors,—a fatty degeneration of proliferating cells.

The PRESIDENT alluded to the possibility of this cyst becoming a centre of infection, and thus the origin of a tuberculosis. He called attention also to the co-existence of gastric ulcer and intestinal ulceration, alluding to the rarity of its occurrence.

Dr. R. M. BERTOLET said he thought it evident this was not a dilatation-cyst, so called, as shown not only by the difference in its contents, but also in the absence of hydronephrosis,—dilatation of the pelvis at the expense of the medullary and cortical layers,—and other conditions usually attending the presence of such cysts; that the mere naked-eye appearances of the cheesy-like contents of the cyst offered no reliable criterion as to their tubercular nature; that without a microscopic examination it was even doubtful whether we had to deal with the cheesy degenerated masses. While he admitted the occurrence of such cheesy foci in the kidneys, whose presence, as well as those foci found in the lungs and other organs and glands of the body, might give rise to the eruption of true miliary tubercles, yet he thought that in other situations they did not usually present so pearly-white a lustre as this specimen.

Further, true tuberculosis of the kidney is not a very rare condition: the tubercles being disseminated beneath the capsule and the mucous membrane lining the pelvis. Great care should, however, be exercised in the discriminating use of the terms "tubercle" and "cheesy masses."

The kidney was referred to the Committee on Morbid Growths.

Dr. F. P. HENRY presented the *diseased supra-renal capsules* from a case of *Addison's disease*.

"T. G., æt. 23, sailor, born in Trieste, Austria, was admitted to the Episcopal Hospital January 4, 1874. The diagnosis on admission was epilepsy, based upon the fact that he had previously had attacks of that disease. He came under my care on May 1, and at that time was suffering from obstinate constipation, with nausea and occasional attacks of bilious vomiting. His pulse was extremely feeble, and he complained of a constant sense of weakness. The man was naturally of a very dark complexion, but there was a peculiar dinginess in the color of his skin which attracted my attention from the first, and which, taken in connection with the other symptoms, led me to suspect that I had to deal with a case of Addison's disease. At times there was great tenderness about the umbilical region, and on one occasion, after palpating the abdomen, the patient uttered loud cries for ten or fifteen minutes, and seemed in great agony. Nothing was found after death to explain this symptom. The urine was examined at different times, and only once presented a faint trace of albumen. The lungs were examined and declared sound, as they proved to be at the post-mortem.

"The prostration became gradually more marked, the pulse more feeble, and the stomach so irritable that the greater portion of the food was vomited. There was frequent vomiting of bile. During the last three days of life there was suppression of urine; Dr. Reed, the resident physician, passed a catheter, but no urine flowed through it. He then received a vapor-bath.

"The man died on June 22. The *autopsy* was made six hours after death. The intestines, both small and large, were found to be quite empty and decidedly contracted. The liver, stomach, and pancreas presented no gross appearances of disease. Spleen slightly enlarged and congested; lungs healthy. The kidneys and supra-renal capsules were removed together. The

latter organs are seen to be much enlarged. In the fresh state, on section, they were of a yellow color, and the opposite surfaces of the section poured out a quantity of thick, yellow matter resembling pus. Small nodules were found in both organs which presented the gross appearances of softening cheesy masses. Under the microscope, a section of one of the diseased glands presented a large quantity of granular matter, a few large oval cells containing oil-globules, and a number of small, irregularly-shaped cells, judged to be tubercle-corporuscles. No trace of the normal structure of the gland, such as its division into cortical and medullary substance, was observed in the specimen examined.

"I omitted to mention that a moderate quantity of adipose tissue was found in the abdominal walls and in the mesentery and great omentum, and that the bladder was empty."

The specimens were referred to the Committee on Morbid Growths.

The PRESIDENT said there were several points of clinical interest about this case, not the least of which was its connection with epilepsy. Recent investigations tend to associate some forms of this latter affection with lesions of the cervical sympathetic; and so, in well-marked cases of Addison's disease, the nature of many of the symptoms, as well as the results of some post-mortem examinations, shows that the abdominal sympathetic nerve is involved.

As to the connection between the melasma and the lesion of the supra-renal capsules, although not so close as Addison thought, at the same time examination shows that cases in which lesions of these bodies are not found are generally wanting in certain essential symptoms of the disease.

He had seen cases where the autopsy proved both the existence and absence of the lesion of the supra-renal capsules; but whenever the typical symptoms were present, such as disturbance of the heart, disposition to syncope, irritation of the stomach, tendency to vomiting, gastric tenderness and associated nervous phenomena, there was always marked caseous degeneration of the supra-renal capsules. In the last of these cases, also, critical examination of the solar plexus indicated disease. There was an increased amount of fibroid tissue in the ganglia, atrophy of the nerve-tubules, and excessive pigmentation of the ganglionic cells. Whether this latter was pathological or not, he could not positively aver, since even in health the pigmentation of these cells is often marked; but it is sufficient that lesions of the solar plexus have been found to exist, in some cases, where it has been carefully examined.

The PRESIDENT presented a *portion of lung from a case of pulmonary phthisis, with cavities (bronchiectatic?), hæmoptysis, death from asphyxia. Enormous clot of blood in a large cavity in right lower lobe.*

"Mrs. C., æt. years, with disposition to phthisis inherited from her mother, enjoyed excellent health until early part of 1873. Cough then set in, at first slight and dry, but later attended with abundant nummular purulent sputa. There was but moderate hectic, no hæmoptysis, but quite rapid emaciation and great prostration. Menstruation continued regular. She was under the care of various physicians, and first consulted me in April, 1874. There were then the physical signs of several small cavities along the anterior surface of the right lung, and of a larger one at the angle of the right scapula. In the left lung there were several points of softening in the upper lobe. The lungs were evidently emphysematous. There was extreme prostration, with marked dyspnœa.

"The treatment consisted chiefly of quinia and iodide of iron. On June 17 there occurred a profuse hæmoptysis. This was soon checked, but was followed by

increased prostration and frightful dyspnœa, with greatly diminished cough and expectoration. The sputa became more and more free from blood, and for forty-eight hours before death were light chocolate-color. Respiratory sounds in the right lung were less clear, and associated with diffused moist and sonorous râles. Death occurred from asphyxia, on the 23d.

"At the post-mortem examination, there was marked emphysema of the lungs. In the left one there were several small cavities, varying in size from one-third to three-fourths of an inch, and deeply seated. These cavities communicated with bronchi, and were lined with smooth membrane. Elsewhere there were several nodules of caseous matter.

"On right side there were several small cavities in anterior part of lung, but the largest was on posterior surface, about level of angle of scapula. This vomica was fully three inches in diameter; it was very superficial, lying immediately beneath the somewhat thickened pleura, which was adherent to the costal pleura over this space. The cavity itself was limited by a distinct fibrous capsule, which could be dissected away from the surrounding lung-tissue as though it had been a heterogeneous cyst. Two bronchi of considerable size entered it. Its lining membrane was slightly roughened and granular; in places a faintly-marked trabecular appearance was visible. On lower wall of cavity there was a button-like prominence three-eighths of an inch in diameter and one-fourth of an inch high. Probably the hemorrhage had proceeded from this spot. The entire cavity was filled with a solid, dark clot of blood, weighing not less than half a pound. None of the other cavities contained blood. The bronchi were filled with thick muco-purulent matter. There were also scattered nodules of cheesy matter, some firm and partially fibroid, others disintegrating. These were usually circumscribed by a fibrous capsule. There was no diffused bronchiectasis. The heart was healthy. The abdominal organs were not examined."

Dr. JOHN H. PACKARD asked whether the small projections into the cavity were the source of the hemorrhage.

The PRESIDENT replied that he suspected this to be the case, but he did not know.

Dr. PACKARD referred to a specimen he had exhibited November 22, 1863, in which several similar cavities, or cysts as they were then called, were present. It was derived from a lady aged 52, who had been addicted to the immoderate use of ether. The cysts were of various sizes; the clinical history shed no light upon their origin or pathology.

Dr. J. EWING MEARS presented a small portion of an *epithelial tumor of the vagina*, which he had removed from a patient, and gave the following brief history of the case:

"She is aged 35 years, is a native of England, and has been married eight years. She has never been pregnant, and menstruation is in every respect normal.

"During the last fall and winter she was treated for ulceration of the womb, and was relieved. Her attention was first directed to the growth in the vagina by a hemorrhage which occurred in May last. Hemorrhages, more or less severe in character, have occurred from time to time, for the relief of which she has used styptic injections. Her general health has been good, and she has been able to perform her household duties without interruption.

"On making a digital examination, an irregular, soft mass could be distinctly felt occupying the posterior wall of the vagina. It was situated at a point corresponding to the junction of the upper with the middle third of the canal. The growth was sessile, the attachment measuring in its long diameter about an inch, and transversely about an inch and a half. Between the mass and the os uteri the wall of the vagina was

smooth and entirely free from any morbid growth. The os tinæ was normal, and free from disease.

"On introducing a Sims's speculum, the tumor could be easily examined, and presented to the eye the appearances described above.

"Slight hemorrhage followed the digital examination, and was readily checked.

"In removing the tumor, an attempt was made to accomplish this by means of the wire *écraseur*: owing to its soft, spongy character, this was not successful. A hooked periosteal elevator was then employed, with which and the finger-nail the entire mass was removed, leaving a smooth surface on a level with the vaginal wall. Hemorrhage was not copious. After thoroughly cleansing the vagina by injections of water, pledgets of lint saturated in Monsel's solution of iron were introduced, which effectually checked the hemorrhage; after the expiration of twenty-four hours these were removed, and the surface was found coated with scales formed by the styptic. In a few days these were removed, leaving a small healthy-looking raw surface.

"Remarks.—This case seems to possess one or two features which it may prove of interest to the Society to consider. At first, guided by the history of the case as presented, Dr. Mears was disposed to regard this growth as a papilloma of the vagina, and in view of this fact had prepared to encounter more difficulty from hemorrhage in effecting its removal. He was struck, therefore, by the comparatively slight amount of bleeding which occurred, and at once concluded that he had to deal with a pure epithelioma. Subsequent microscopic examination confirmed this conclusion, since there was an entire absence of the dendritic growths which characterize the papillary or villous form of cancer. Large quantities of variously-shaped nucleated cells, many containing granules and a delicate stroma, were all that could be seen in a number of portions which were examined.

"It has occurred to Dr. Mears that this possibly may be one of those instances in which there has been a transition of papilloma into epithelioma as noted by Rindfleisch. This belief is founded solely upon the statement as to the free hemorrhages which occurred in the early stages of the disease.

"The extremely rapid growth of the tumor is proven by the statement of the physician by whom the patient was treated for cervical endometritis, and who assures Dr. Mears that three months ago there was not a sign of any morbid growth in the vagina. Dr. Mears has, in studying this case, been interested in learning that, so far as the records of this Society furnish evidence, and also from the statements of several physicians and surgeons with extended experience in the treatment of the surgical diseases of the female generative organs, who have been interrogated, primary cancer of the vagina is not of very frequent occurrence. The volumes of Transactions of this Society published, now three in number, do not contain the report of a case. During the past two years two cases have been reported to the Society,—one by Dr. Parry, and one by Dr. Mears."

Dr. JOHN H. PACKARD read the history of a case of *tuberculous deposit at base of brain*, with obscure symptoms:

"A. Y., æt. two years, was first seen by me May 31. His parents had moved over from West Philadelphia about ten days before, and on his becoming indisposed they placed him under the care of a homœopath, who gave him something to check the diarrhœa, with dark and offensive stools, which was then his chief symptom. The child continuing to droop and to show an increasing tendency to drowsiness, they sent over for Dr. M. B. Musser, their former attendant, who advised them to send for me.

"During my attendance, the child's symptoms were

chiefly stupor, with occasional accessions of jerking, affecting more especially the right arm and leg. The mother said she noticed some strabismus, but could not, of course, tell which eye was most affected. The thumbs were not drawn in. The child took scarcely any food, but did not vomit. The bowels were inactive unless medicine was given. The pulse was from 90 to 93 in the minute, throughout, except on the last day, the sixth of my attendance, when it grew much more rapid and feeble, and the temperature seemed normal to the hand; there was occasionally a marked degree of dryness and harshness of the skin.

"A few days before death it became evident that vision was gone; the eyes were normal in appearance, but the pupils were unaffected by light.

"Death took place quietly on the 6th of June.

"Autopsy, made by Dr. G. S. Gerhard and myself, twenty hours after death. Head only examined. Body in ice, and stiff.

"Skull-cap normal in thickness and firmness; somewhat adherent to dura mater, which seemed normal. Some subarachnoid effusion.

"All the veins on the surface of the brain were distended with blood, those on the right side particularly so. A good deal of serum flowed out as the membranes were divided, perhaps partly from the ventricles.

"Sections of the brain showed less than normal vascularity. The central portions of the hemispheres, especially the left, were very soft. The corpus callosum was entirely diffuent, and the fornix, choroid plexuses, and septum lucidum were scarcely traceable. All the ventricles were dilated with serum, and some granular deposits existed along the plexuses.

"On the base of the brain there was a good deal of effused lymph; a large mass existing in the interpeduncular space, on the front of the pons Varolii, and along down the medulla oblongata and spinal cord.

"In the fissure of Sylvius on either side, around the middle cerebral artery, a granulated mass of tuberculous deposit existed, probably interfering with the flow of blood through the vessel, and thus inducing the softening above noted. Smaller deposits of similar granulations existed in great abundance over the other portions of the base of the brain.

"The optic globes were not removed for examination, the father of the child being present.

"Dr. J. G. Richardson was kind enough to examine the deposits removed, and sent me the following report:

"I find on microscopic examination that the "little sago-like masses" visible in the pia mater of the portions of brain you left with me on the 8th instant are *true miliary tubercles*, being seated in the tunica adventitia of the arterioles and smaller arteries, and made up of oval and obtusely angular cells (sometimes exhibiting endogenous cell formation), arranged in a delicate network, each of whose meshes generally includes but a single cellular element."

GLEANINGS FROM OUR EXCHANGES.

TREATMENT OF PARAPHIMOSIS.—M. Bardinet suggests the following simple mode of reducing a paraphimosis. He passes between the prepuce and corona a blunt lever—the blunt end of an ordinary hair-pin answers well—one being placed in the upper, another at some nearly corresponding place beneath. The fingers are then used in drawing forward the prepuce by a sort of screwing movement, the hair-pin or other blunt instrument, such as the handle of an ordinary teaspoon, acting as a lever to slide the prepuce over.

IMPORTANCE OF THE PURITY OF CHLORAL HYDRATE.

—Dr. Oscar Liebreich has recently published a paper in the *Berliner Klinische Wochenschrift*, in which he calls attention to the important subject of the purity of chloral hydrate, and the effect which its deterioration may produce on the patient to whom it is administered, and on its reputation as a remedy. The case, he says, is different from that of such a substance as quinia, the adulteration of which will only reduce, but not pervert, the proper action of the drug. With chloral and other substances prepared by analogous chemical processes, the result of the manufacture may be the formation of compounds which, if administered, produce an altogether different result from that intended. The process of manufacture is one which requires great care; and it seems that it is at least difficult to insure the purity of chloral if made in large quantities. Liebig himself, who discovered it, never attempted to make more than a few grammes at once; and Dr. Liebreich was so convinced, when he brought it into notice as a medicinal agent, that purity was necessary for success, that the first supplies were made under his immediate superintendence. At present it is manufactured in various places, and the result is that in some parts of the continent, notably in Saxony and Switzerland, it has fallen into disrepute. Dr. Liebreich has made a collection of specimens of the drug used in cases where it has failed to produce its proper action, and possesses, he says, some horrible chemical compounds which he would not venture to give to a human being. He prefers the crystallized form of chloral hydrate, as the most stable. It may contain hydrochloric acid: this is no disadvantage if the proportion remain the same; but if it increase it indicates that the formation of dangerous compounds may be going on. Sometimes the hypnotic action is increased: this he attributes to the production of chlorine compounds, which are more readily changed into chloroform than chloral itself is. An acid reaction arising from the formation of trichloroacetic acid does not show that the chloral is unfit for use, though it weakens its action. In pure chloral this action is limited, while impure chloral is liable to the constantly-increasing production of acid compounds—not trichloroacetic acid—of a deleterious nature. Dr. Liebreich remarks that the German Pharmacopœia is in error in fixing the boiling-point of chloral hydrate at 95° Cent. (203° F.). This, he says, is correct for anhydrous chloral, but the boiling-point of chloral hydrate is not constant.—*Brit. Med. Jour.*, March 21, 1874.

GUARANA IN CHRONIC RHEUMATISM.—Mr. E. A. Rawson states (*Irish Hospital Gazette*, April 15, 1874) that when suffering severely from lumbago, and other remedies failing, he tried guarana as an experiment. He took fifteen grains in hot water with cream and sugar, and experienced entire relief from pain for twenty-four hours. When the lumbago returned, he took another dose, with the same result. "I gradually," he says, "increased the dose to forty grains, and took it regularly once a day for about a week. The lumbago disappeared. I gave up the guarana, and in a few days the pain in the back returned. A forty-grain dose removed it, and it did not return for several days afterwards. Now, whenever it does, I have my remedy at hand. During the last month I have experimented largely with guarana on a variety of patients, rich and poor. The results vary. When the pain is acute, coming on with sharp stings, guarana acts like magic; when it is of a dull, aching character, the drug is slower in its action, and several doses must be taken before any decided benefit can be perceived.

"I have come to the following conclusions, viz.: that whenever the fibrous envelopes of nerves, the aponeurotic sheath of muscles, the fasciæ or tendons, are the

parts affected, guarana gives, if not instantaneous, at least very immediate relief, which will last from twelve to twenty-four hours; and I confidently expect that perseverance in the use of the drug, gradually increasing the dose up to forty grains, will entirely remove any of the above-mentioned kinds of rheumatism.

"Of the good effects of guarana on nervous hemicrania there is no doubt; and I trust it will prove in other hands as valuable against rheumatism as it has in mine."

TWO CASES OF ANÆSTHETIZATION DURING SLEEP.—Having read in the April number of your journal an article entitled, "Can a Person be Anæsthetized during Sleep?" it occurred to me that a brief report of two cases of successful chloroformization during sleep might prove interesting.

The first case was that of a little girl named Parsons, aged eight years. As a sequel to acute otitis media, the mastoid cells of one side became inflamed; and Dr. E. M. Curtis was invited to take charge of the little sufferer.

Deeming it expedient to operate for the evacuation of the pus as soon as convenient, we agreed to meet at nine o'clock of the following morning for this purpose. On our arrival, we learned that the patient had slept but little during the night, but was then sleeping sweetly. Chloroform was at once administered upon a four-by-six piece of surgeon's lint, held as near the child's mouth as possible without coming in actual contact. Not the slightest effort was made by the child to avoid the inhalation of the anæsthetic, and in a few moments she was well under its influence, and was immediately carried into an adjoining room and placed upon a lounge, where the doctor very soon completed the operation.

The child being still anæsthetized, the wound was dressed, and before she had fully gained consciousness we both left the room, having first given proper instructions to the parents. On making my evening visit, I was informed that my patient was not yet aware that she had undergone a severe surgical operation, or that either Dr. Curtis or myself had visited her on that day.

My second case occurred on the 15th inst., in the person of a little girl two and a half years old, named Drake, brought to me from Galena, Nevada, for the purpose of having a supernumerary toe removed from each of her feet. While waiting for the arrival of Dr. Nelson, who assisted me in the operation, the child fell asleep and was placed in the operating-chair. As soon as the doctor arrived, chloroform was administered in the manner already detailed in the former case, and with equal success, and the operation was soon completed without the occurrence of an unfavorable circumstance.

In the first case the condition of the child probably favored the ready induction of anæsthesia, while in the second, age alone could be supposed to have influenced the result.—*Dr. R. W. Clunes*, in *Pacific Med. and Surg. Jour.*

OPHTHALMOSCOPE IN THE DIAGNOSIS OF CEREBRAL TUMORS.—Dr. Fitzgerald publishes in the *Dublin Journal of Medical Sciences*, June, 1874, a communication on this subject, in which, after some preliminary remarks on the use of the ophthalmoscope in disease generally, he goes on to speak of the appearances presented by the optic nerve in cases of cerebral tumor. Von Graefe's description of the "stauungs papilla" is given in full. Following this, a case coming under Dr. Fitzgerald's observation is noted, and a chromo-lithograph given of the appearances presented in the retina. Dr. Fitzgerald then passes on to consider briefly the theories which have been put forward to account for the congested condition of the disk in cases of cerebral

tumor. After reviewing these, he remarks that an erroneous impression prevails in regard to Von Graefe's opinion of the diagnostic value of the stauungs papilla. Graefe did not regard this appearance as *absolutely* diagnostic of the presence of a cerebral tumor, but merely as the *expression* of increased intra-cranial pressure, and consequently whatever caused an increase of the pressure would also produce this swollen state of the disk.

To demonstrate the fact that this condition may be present in cases where there is no cerebral tumor, Dr. F. alludes to a drawing in his possession, taken from the retina of a patient suffering from meningitis, in which the appearances were quite characteristic. He concludes: "I am aware that an objection may here be urged, to the effect that if the same appearance can be produced by a cause other than tumor of the brain, such appearance is after all of very little practical value as a diagnostic sign. To this I would answer, that, apart from a most careful study of all the symptoms in any particular case, it can scarcely be looked upon as of any special diagnostic value; but that, on the other hand, due regard being paid to those symptoms, it must prove of invaluable assistance in forming a diagnosis."

Dr. Fitzgerald's article has been republished in pamphlet form by Fannin & Co., Dublin.

GALVANO-PUNCTURE IN ANEURISM (*Lancet*, July 18).—Dr. Anstie performed this operation recently at the Westminster Hospital in a case of abdominal aneurism, supposed to be connected with the coeliac axis. It had been treated for some time by means of subcutaneous injections of ergotin, after Langenbeck's method; thirty grains, altogether, having been injected, at intervals, during two days. This treatment having proved unavailing, galvano-puncture was performed, as follows. Two needles, insulated with vulcanite up to three-quarters of an inch of the points, were introduced into the aneurism at the most prominent part, and were then connected with the positive pole of the battery, which consisted at first of twelve Bunsen's cells, subsequently reduced to eight. The current was kept up for thirty minutes, during which time the patient suffered acute pain. Both needles were then cut short and left in the aneurism for twenty-three hours, when they were removed on account of redness and discoloration of the skin. The day after the operation the aneurism was firmer, and the pulsation appreciably diminished, the patient being quiet and composed. A subcutaneous injection of a third of a grain of morphia was given on the night of the operation, and another injection on the next morning. When last heard from, the patient continued in a very satisfactory state.

GLASS SYRINGES IN THE VAGINA.—SIR: It is very creditable to get broken glass syringes out of the vagina without damage to the patient or to the practitioner, but why did they allow their patients to use such instruments? Were it not that you have lately recorded two cases in which a glass syringe had broken in the vagina, and a third case in which death followed this accident,—were it not that I am occasionally consulted by patients who have been told to inject a weak solution of acetate of lead or of alum into the vagina, by means of a glass syringe, to cure uterine ulceration,—I should not think it worth while to enter a protest against the recommending of such instruments to patients. The danger attending the use of glass syringes for vaginal injections is evident, and their utter uselessness is no less clear; for, while the injection of two or three ounces of a solution of acetate of lead or alum can have little effect on a diseased womb, much good may be done by the injection of one or two pints of a similar solution, by means of one of the india-rubber siphon syringes sold by

all chemists. A glass syringe should only be used by the practitioner himself, when he wants to act on the vagina by a strong solution of nitrate of silver, or some similarly potent medicine.

I am, etc.,

EDWARD J. TILT.

—*British Medical Journal*, July 18, 1874.

ACNE ROSACEA.—Dr. W. B. Cheadle (*Practitioner*, July) takes Hebra's view of the pathology of this affection, in opposition to that of Wilson and Tilbury Fox. He does not regard it as an acne, the sebaceous glands being neither primarily affected nor in many instances involved at all. The essential morbid change does not consist in any inflammatory process, but in a new formation of vascular and connective tissues, the changes in the sebaceous glands being secondary or accidental. The conditions associated with its production are usually excessive indulgence in alcoholic drinks, gastric disorder, uterine derangements, and prolonged or frequent exposure of the face to heat or cold.

The manner in which these causes produce the particular effects observed is, Dr. C. thinks, by long-continued hyperæmia brought about by reflex action upon the local vascular system. An example of transient reflex action is seen in flushing of the face after a hearty meal or alcoholic indulgence; and it is this same effect persistently exercised which brings about morbid changes. Of course, as there is no true local inflammation, local remedies are generally useless. Stimulating applications—lotions of the perchloride of mercury, of sulphur, or of both, and applications of the acid nitrate of mercury—are the only local remedies which Dr. C. has found advantageous. Internal remedies which relieve the distention of vessels, saline purgatives for instance, are of use. Arguing from the pathology of the eruption, Dr. C. was led to apply faradization in several cases, and with the most encouraging results.

TAPE-WORM IN AN INFANT.—Dr. Dawosky relates a case of an infant six months old suffering from tape-worm. "After satisfying myself of the presence of the parasite," he writes, "I ordered a small dose of castor-oil daily for the child, and at the end of a week had the satisfaction of seeing the last piece of the worm, with the head attached, in the evacuations. The question now arises, how did the ovum of the tape-worm obtain ingress into the stomach of this child, which had only been nourished at the breast of the mother? Both parents were, as stated, in excellent health, and in neither of them could any traces of tape-worm be discovered. Dr. Weisse of St. Petersburg, the earnest defender and advocate of the meat-cure, states that he had in many instances observed tape-worm in children after the use of raw meat, and relates the case of a child eighteen months old. Yet in all these instances the source of the parasite could be traced. But how did the infant of six months, that had no nourishment but the breast of its mother, get the tape-worm?"—*Memoirabilien*, April, 1874.—*Baltimore Physician and Surgeon*.

UNUNITED FRACTURE OF THE THIGH TREATED BY THE INJECTION OF AMMONIA.—Bourguet has reported a case in which he has employed this treatment with success. A fracture of the diaphysis of the femur had not united after a period of five months. At this time ten drops of a solution of ammonia, in the proportion of one to three, were injected into the thigh, immediately about the extremity of the upper fragment. Four weeks later, twenty drops were injected about the lower fragment. Three days later a third was made between the fragments, and a week later a fourth of twenty drops, containing equal parts of ammonia and water. Within the next five weeks four injections were made with a solution of iodine and iodide of potassium. The

leg lay in a water-glass splint. The phosphate of calcium was given internally. Six months after the first injection the consolidation was complete and the callus very extensive. This is the second case that Bourguet has treated successfully in this way.—*Allg. Med. Central Ztg.*, 39, 1874.—*Medical Record*.

EXPLOSIVE MEDICINES.—Young medical men are warned (*Revue de Thérapie*, 1873) against combining in their prescriptions certain agents which in case of the development of any acid, or even if exposed to a moderately high temperature, are liable to go off. Among these dangerous formulæ may be cited a prescription for pills not unfrequently employed in England, composed of nitrate of silver, extract of nux vomica, muriate of morphia, conserve of roses, and extract of gentian, which, when affected by the development of heat, will speedily explode. In like manner, pills made of nitrate of silver and creasote, or carbohc acid, will very soon generate heat sufficient to induce spontaneous combustion. Still more surprising to the occupants of the sick-chamber is the energetic explosion (suggestive of nitro-glycerin) arising from the pills or mixtures of which oxymuriate of potash forms an ingredient.—*Clinic*.

SUDDEN DEATH FROM EMBOLISM OF THE PULMONARY ARTERY AFTER INFLAMMATION OF VARICOSE VEINS (*The Edinburgh Medical Journal*, May, 1874).—M. Chabenat gives the following conclusions on this important subject. 1. Inflammation of varicose veins of the adhesive type predisposes to embolism of the pulmonary artery, and, as a consequence, to sudden death. 2. The clot heaps up, and is carried on by the current of blood when the patient is in process of cure: it is generally the result of an effort. 3. Death is due in general to the size of the clot, which completely blocks up the pulmonary artery or one of its large branches. 4. The patient dies almost always without asphyxia, rarely by fainting. 5. As yet, we have no means by which to prevent the migration of the clots: it is therefore necessary as far as possible to prevent them from breaking up.

TETANUS FOLLOWING ABORTION (*The Medical Press and Circular*, June 10, 1874).—Mr. M. A. Boyd reports the case of a primipara, thin, anæmic, and nervous, in whom abortion was produced during the third month, by a fall. The hemorrhage was easily controlled, and the remains of the ovum came away entirely on the third day. She did well until the morning of the sixth day, when trismus made its appearance, together with the characteristic *risus sardonius*; opisthotonos followed on the next morning, with frequent and painful spasms, and her condition steadily grew worse until her death, which occurred six days after the commencement of the tetanic symptoms. She was treated with large doses of chloral,—nearly an ounce every twenty-four hours,—and with nutrients and stimulants. The tetanus was probably due to irritation of the brain, from deprivation of blood in an already anæmic subject.

BELLADONNA IN GOITRE (*Ibid.*).—Dr. R. T. Smith reports two cases of exophthalmic goitre, which were relieved and almost cured by the free administration of tincture of belladonna, after the failure of nearly all other known remedies. He considers it possible that the relief was given primarily through the heart, the drug acting sedatively thereon.

INFLUENCE OF ALIMENTATION ON THE PROPORTION OF WHITE GLOBULES IN THE BLOOD (*Le Progrès Méd.*, June 20).—Dr. Wilbouchevitch had under his observation for some time a man who suffered from a stricture of the œsophagus. When first seen, the patient had lived for some time on a purely vegetable diet, but as he grew

better he was gradually enabled to eat more and more nitrogenous food. By carefully enumerating the corpuscles from time to time and comparing the results with those elsewhere obtained, Dr. W. has arrived at the conclusion that a purely vegetable diet has an evident influence in largely increasing the relative proportion of white corpuscles.

ARGYRIA (*Le Progrès Méd.*, June 13).—M. Duguet presented at a recent meeting of the Société de Biologie a patient whose face, chest, and arms presented a silver-gray tint, due to the absorption of nitrate of silver. The other parts of the body were free from discoloration, with the exception of the velum palati and pharynx, which were quite dark. The absorption was supposed to have followed repeated cauterizations of the pharynx with crayons of argenti nitrat., which had been practised some years previously.

URETHRAL FEVER (*The Practitioner*, May, 1874).—Dr. Leopold Dittel considers urethral fever a peculiar affection, caused by the reaction of the urinary organs and the sympathy of the system generally with the local lesion. He distinguishes three forms: 1, the nervous form, with pure reflex reaction; 2, fever caused by lesion of the urinary tube; and 3, the so-called morbid form, which is associated with disease of the kidneys and their pelves, and often ends fatally.

PHYSIOLOGICAL ACTION OF CHLORAL.—M. Byasson thinks that the longer duration of action of chloral compared with that of chloroform is due to the slowness of the chemical action, and that the difference in the physiological phenomena is explained by the intervention of formic acid produced at the same time as the chloroform, and acting under special condition.—*Acad. des Sciences*.

MISCELLANY.

AT a meeting of the Commissioners of Charities and Correction in New York, held during the last week in July, a resolution was introduced and passed reorganizing the Medical Board of Bellevue Hospital. This Board consists of nineteen members, twelve of whom have been removed from their positions by the terms of the resolution referred to. The names of these gentlemen are as follows: Drs. Isaac E. Taylor, Lewis A. Sayre, John J. Crane, John W. S. Gouley, B. Fordyce Barker, Frank H. Hamilton, Alexander R. Mott, Thomas M. Markoe, Austin Flint, Jr., William M. Polk, William T. Lusk, and E. G. Janeway. Of these, Drs. Crane, Sayre, and Taylor have been members of the Board for twenty years, and the majority of the others from five to fifteen years.

One would naturally suppose that the Commissioners had been influenced only by the most weighty reasons in taking such unusual and extraordinary action in regard to the hospital appointments. Thus far, however, no reason whatever has been assigned by them for this change. This action on the part of the Commissioners will seriously cripple the corps of instructors at the Bellevue Hospital Medical College, and, if persisted in, may result in the destruction of the school. It is darkly intimated that professional jealousies are at the bottom of this movement, and that the brilliant and rapid success of this school has made it altogether too dangerous a rival to older seats of medical learn-

ing. We can hardly believe that the profession of New York will countenance any such movement as that which has been hinted at, and we shall hope to hear that the force of medical opinion has induced the Commissioners to see the propriety of reconsidering their action.—*Boston Med. and Surg. Journal.*

A NEW MEDICAL JOURNAL.—The *Archives of Dermatology*, a quarterly journal of skin and venereal diseases, has been started in New York City, with L. Duncan Bulkley, A.M., M.D., as its editor.

The following gentlemen have consented to be collaborators, and have undertaken the Digest and Review Department: Drs. T. E. Satterthwaite, E. B. Bronson, F. P. Foster, F. D. Weisse, G. H. Fox, H. G. Piffard, and Geo. M. Beard, of New York; Drs. L. A. Duhring and A. Van Harlingen, of Philadelphia; and Drs. E. Wigglesworth, Jr., and Jas. C. White, of Boston, among whom Dermatology has been divided; and Drs. F. J. Bumstead, R. W. Taylor, F. R. Sturgis, E. L. Keyes, C. S. Bull, G. M. Lefferts, and R. F. Weir, who have charge of the branches embraced under Syphilis and Venereal Diseases. Subscription, \$3.00 a year.

CLARIFICATION OF TURBID WATER.—Sulphate of aluminium and potassium, alum, or chloride of aluminium have long been used for this purpose, since, as is known, these salts are decomposed in presence of the bicarbonates of calcium and magnesium, producing hydrate of alumina, which in precipitation carries with it the substances held in suspension. In place of these substances the ordinary perchloride of iron, or rather the polybasic perchloride, may be used. This salt introduced into turbid waters clears them with a rapidity equal to that of the aluminous salts. Four drops of the iron solution suffice ordinarily to clarify two quarts of water.

A SOMEWHAT novel case occurred at Lennoxtown, Stirling, on Thursday. A young cow had been grazing in a field in which rifle-practice had been going on. As the animal died very suddenly, a post-mortem was made, which disclosed the fact that it had been feeding upon the fragments of spent bullets, the stomach being loaded with twelve pounds of lead.—*Med. Press and Circular.*

NOTES AND QUERIES.

"THE REVIVAL OF LEARNING."

TO THE EDITOR OF THE PHILADELPHIA MEDICAL TIMES:

As a specimen of the educational advantages which some of our Philadelphia medical students have enjoyed, allow me to submit the following "choice selections" from the ——— Hospital dispensary record:

"Henry Devlin, *Ireland, varacos vains*,—lead water x opii."

After writing the above, it is evident that our embryo Æsculapius consulted his Duglison, for on the next page was the entry "*Vara Cose Vains*."

One of his patients was afflicted with "*abscess*," and was treated by a "*poltis*."

Another, suffering from an "*intis ud*," was also treated by a "*poltis*."

A third unfortunate was ordered to use a "*pick plast*."

I ask, my dear sir, is not this enough to raise the

GHOST OF NOAH WEBSTER?

PHILADELPHIA, August 10, 1874.

OFFICE OF THE SUPERVISING SURGEON,
U. S. MARINE-HOSPITAL SERVICE,
TREASURY DEPARTMENT, August, 1874.

DOCTOR,—The Supervising Surgeon of the United States Marine-Hospital Service having been designated by Joint Resolution of the XLIIId Congress, approved March 25, 1874, in connection with a medical officer of the Army, "to confer with the health authorities and resident physicians of such towns [as were visited by the Cholera Epidemic of 1873], and to collect, so far as possible, all facts of importance with regard to such epidemic,"—for the purpose of making a report of the same to the President of the United States to be submitted to Congress,—I have the honor respectfully to solicit a detail of the facts which came under your observation concerning the propagation and spread of the disease during that year.

The following memorandum embraces, substantially, the points upon which information is desired:

1. Name, sex, and age of patient.
2. Residence of patient—town, street, and number.
3. Day and hour of attack.
4. Premonitory symptoms, their nature and duration.
5. Progress of the disease:
 - a. Day and hour of beginning of rice-water discharges.
 - b. Day and hour of beginning of cramps.
 - c. Day and hour of beginning of collapse.
 - d. Period and extent of suspension of renal function.
 - e. Nature of treatment and result.
 - f. Day and hour when convalescence began.
 - g. Day and hour when death occurred.
 - h. Post-mortem appearances in detail.
6. Story of house occupied, and height of floor from ground.
7. Sanitary condition of house and enclosure:
 - i. As to cleanliness of rooms—clean, neglected, filthy.
 - k. As to ventilation and light—good, defective, bad.
 - l. As to drainage of house—good, obstructed, absent.
 - m. As to drainage of ground—good, obstructed, absent.
 - n. As to location and condition of privies or water-closets, connection with street-sewer, mode of flushing, of ventilation of soil-pipe, disinfection, etc.
 - o. As to surface water, garbage, or filth about the premises.
8. Source and quality of water-supply. If from a well or cistern, proximity of privy, sewer, or drain thereto, and chance of pollution.
9. General topography of localities in a given town where cholera prevailed.
10. Character of soil.
11. Character of drainage.
12. Occupation and habits of patient, and whether a resident of house where attacked for two weeks or over.
13. The facts in any case where the patient was attacked within two weeks after removing from an infected district into one previously free from the disease, specifying the respective districts and character of exposure.
14. The sequence of cases where more than one was attended, with their relations to each other, and to the cases of other physicians, with names of such physicians.
15. The means and agents used by the physician, by the family, and by the municipal authorities to prevent the spread of the disease, and the result of such preventive measures.
16. Public measures taken to prevent the introduction of the disease into your community, with the result.
17. Temperature, rain-fall, and prevailing winds for as long a period as practicable prior to appearance of cholera, and also during its continuance.
18. Dates of first and last cases of cholera in the locality in 1873—total number of cases and mortality.
19. Connection, if any, between first cases in 1873, and the localities of the disease in the immediately preceding epidemic.
20. Names of cities, towns, and villages known to you where cholera occurred during 1873, with any facts relating to the introduction of the disease to such, and the address of some respectable practitioner residing in each of the places named.

Contributions to this investigation, by answers to the foregoing,—or to so much thereof as practicable,—will be fully acknowledged in the official report, the value of which, it is hardly necessary to say, will largely depend upon the co-operation of the profession thus sought.

Copies of any reports or papers which you may have already prepared on the subject, or of those prepared by others and annotated or amended by yourself, will also be of service, and may be forwarded, to be returned if desired.

I am, Doctor, very respectfully,

JNO. M. WOODWORTH,
Supervising Surgeon.

OFFICIAL LIST

OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U. S. ARMY, FROM AUGUST 11 TO AUGUST 17, 1874, INCLUSIVE.

HEIZMANN, C. L., ASSISTANT-SURGEON.—Assigned to duty with Expedition under Captain Anson Mills, 3d Cavalry, and, upon return of that command, to rejoin his proper station, Fort McPherson, Nebraska. S. O. 111, Department of the Platte, August 10, 1874.

LAUDERDALE, J. V., ASSISTANT-SURGEON.—Assigned to temporary duty at Fort Leavenworth, Kansas. S. O. 125, Department of the Missouri, August 10, 1874.

SATURDAY, AUGUST 29, 1874.

ORIGINAL COMMUNICATIONS.

AN INVESTIGATION INTO THE ACTION OF VERATRUM VIRIDE UPON THE CIRCULATION.

BY H. C. WOOD, JR., M.D.,

ASSISTED BY JOS. BERENS, M.D.

PART I.—VERATROIDIA.

(Continued from page 740.)

Section B.—Action on the Heart and its Nerves.

IT having been determined that the direct action of veratroidia upon the circulation is to lower the arterial pressure, and at the same time to slow the pulse, the question naturally arose, Does the alkaloid act directly upon the heart, or does it influence the latter slowly through the nervous centres? The following experiments were instituted to settle this point:

Experiment X.—A stout tomcat. During anæsthesia, opened the ascending cava and injected three-fourths of a grain of veratroidia (impure). There was an instantaneous arrest of respiration, followed at once by a violent general tetanic spasm, involving all the muscular system and the diaphragm. After the injection, the heart beat several times quite forcibly, though not nearly with the normal strength. Upon opening the thorax, the heart was found making vermicular contractions, which continued for some minutes. The venous pressure in the large veins was very decided, causing the blood to squirt from them when cut.

Experiment XI.—A large dog. One-tenth of a grain of pure veratroidia was injected into the femoral vein. The heart was immediately arrested in diastole, and, respiration occurring, became enormously dilated with blood. The auricles continued to pulsate. The left ventricle contained arterial blood, the right venous blood. The application of the strongest current to the surface of the heart, or by needles introduced into it, induced no contractions whatever.

Experiment XII.—A large cat. The spine was cut in the upper dorsal region, and a small hole was made in the chest, so that the finger could be inserted in such a way as to rest on the heart,—the animal being kept during the entire period anæsthetized. One-eightieth of a grain of veratroidia (impure) was injected into the femoral vein, without any very obvious effect. One-fortieth of a grain was then injected, with a similarly negative result. One-half of a grain was finally thrown into the vein, and the heart-beats at once commenced to slacken, and soon ceased. At the immediate autopsy the heart was found to be flabby and dilated. It refused entirely to respond to galvanic currents.

Experiment XIII.—A large terrier cur had his cord cut in the extreme upper dorsal or lower cervical region, and the par vagum also divided. The respiration was maintained artificially. The animal received various small doses of impure veratroidia, and finally one-fourth of a grain was thrown at once into the femoral vein. In a minute, or less, the pressure fell to nothing, and pulsations ceased. At the immediate autopsy the heart was found flabby and dilated. Galvanic currents had no perceptible effect upon it.

Experiment XIV.—A large cur dog had its cord cut in the upper dorsal (lower cervical?) region, and after-

wards its pneumogastrics. After small amounts of a very impure veratroidia had been exhibited, three half-grain injections were thrown, in as many minutes, into the femoral vein. The heart-movements ceased immediately after the last injection; the pressure in half a minute fell to ten, in another half-minute to zero. The strongest currents were unable to affect the cardiac muscle.

The above experiments, which have been confirmed at various times, certainly prove that veratroidia has a direct action upon the cardiac muscle: of course, those made after previous division of the cord and of the pneumogastrics, *i.e.*, after isolation of the heart, are the most satisfactory. In Experiment X. there is indeed no proof that the arrest was really the result of a direct action of the poison upon the cardiac muscle.

A fact which is indicated by the above experiments, and which is very obvious in the light of subsequent experimentation, is that very large doses of the alkaloid are required to affect the cardiac muscle,—doses much greater than are sufficient to kill, and very much greater than the minimum amount which will profoundly affect the respiration. It seemed probable, and subsequent experimentation has confirmed the surmise, that the drug has some action upon the heart besides that which it exerts directly on the cardiac muscle. In endeavoring to determine this, the first study was as to its influence upon the cardiac inhibitory nerves.

A reference to Experiment IV. or V. will show that an enormous reduction of the pulse follows the exhibition of veratroidia. Experiment further shows that this occurs when artificial respiration is kept up actively, and therefore that it is due not to an indirect action of the alkaloid, but to an influence exerted directly on the heart or its nerves. The reduction in the number of the pulse-rate may be due to an influence exerted upon the pneumogastrics, or may be the result of some other cause. To test this, the following experiments were undertaken:

Experiment XV.—A stout terrier. A small dose of woorari, just enough to quiet, given, and artificial respiration practised.

TIME.	DOSE.	PULSE.	REMARKS.
0 m.			Cut the pneumogastrics.
27 "		168	
30 "	gr. 1-40		Injected into the peritoneal cavity.
39 "	gr. 1-40		Injected into the peritoneal cavity.
47 "		189	

Experiment XVI.—A stout cur.

TIME.	DOSE.	PULSE.	REMARKS.
0 m			Cut the pneumogastrics.
26 "		176	
64 "		180	
76 "	gr. 1-40		
78 "	gr. 1-40		
82 "		164	
90 "	gr. 1-40	168	
104 "		212	
110 "	gr. 1-20	112	
113 "		204	

These two experiments are in accord in showing that doses of the drug which, in the uninjured dog, lower the pulse-rate very greatly, have no effect when the par vagum has been previously divided. Proof is thus afforded that the reduction of the pulse which is ordinarily present is brought about through the inhibitory nerves. Another method of getting the same result is by a division of the par vagum in the animal under the influence of the poison, as in the following experiments :

Experiment XVII.—A stout dog.

TIME.	DOSE.	PULSE.	REMARKS.
0 m.		68	
1 "	gr. 1-40		Injected into the carotid slowly.
3 "		44	
11 "		52	
12 "			Cut the pneumogastrics.
12 1/4 "		168	

This experiment is in accord with those previously given, and seems, with them, to establish the fact that the primary slowing of the cardiac beats by the drug is chiefly brought about by an action on the inhibitory cardiac nerves.

This being so, it is *a priori* to be expected that when the heart is freed from the influence of all the nerves antagonistic to the pneumogastrics, the results of the primary inhibitory impression should be very marked.

In order to test this point, the following experiments were performed :

Experiment XVIII.—A large cur dog. Veratroidia impure. The spine was cut in the lower cervical region.

TIME.	DOSE.	PULSE.	PRESSURE.	REMARKS.
0 m.		136	85-93	
3 "		122	35-40	
8 "				The fall is due to an extremely active artificial respiration. Artificial respiration regulated to thirty strokes of bellows per minute, and so kept during the rest of the experiment.
13 "		160	65-70	
14 "	gr. 1-30		65-70	One-thirtieth grain injected into femoral vein. Instantly the arterial pressure fell nearly to zero, and all movement ceased. No pulse could be felt in the exposed carotids or femorals, or motion of the heart through the chest-walls. About one minute after this, the pneumogastrics were cut, and instantly the pulse returned in the carotids and femorals.
31 "		168	50-60	

Experiment XIX.—A youngish cur, of moderate size. The cord was cut in the extreme upper dorsal or lower cervical region. After some time, one-fortieth of a grain of impure veratroidia was injected into the femoral vein. Before this, the mercury in the cardiometer had shown signs of the formation of a clot, but instantly after the injection the mercury fell very much, and after one or two very slow pulsations all movement ceased. The pneumogastrics were divided, but a clot prevented any movement of the mercury. On opening the chest, the heart was found to be in vigorous movement.

Experiment XX.—A powerful bull-dog.

TIME.	DOSE.	PULSE.	PRESSURE.	REMARKS.
0 m.				Spine cut in lower cervical region. Artificial respiration.
23 "			95-105	
26 "		56	90-100	
32 "		56		
38 "			90-105	
45 "	gr. 1-12			One-twelfth grain injected into the femoral vein. The mercury fell at once to 10 (equivalent to zero). No beat occurred for one or two seconds, then a succession of very distant, slow, and powerful beats, with a great rise of arterial pressure, followed by a greatly increased rapidity of heart's action. In a few seconds this high pressure gave way to a sudden slowing or stoppage of the pulse and fall of the pressure to 15; then slow, distant, very full beats (15 c. each), followed by a rise of pressure to 125, with a rapid pulse, then another fall, etc., as before. Alternations continuing, but not so marked as before. Injected as before.
49 "				
51 1/2 "	gr. 1-12		95-100	
51 3/4 "			20-35	
52 "			145-160	
52 1/4 "			30-33	
52 1/2 "			140-145	
52 3/4 "			50-60	
53 "				Same alternation of rise and fall. Into jugular.
54 "	gr. 1/2			
61 "			55-60	
62 1/2 "	gr. 1/2			Into jugular.
64 "		180	80-180	
70 "		168	40-50	There is no longer a marked rise or fall of the mercury or pulse. Both have been very steady at their present position for some minutes.
70 1/2 "				Par vagum cut.
71 1/2 "		168	55-60	
73 "			55-60	
79 "		168	50-60	Dog killed.

These experiments certainly are corroborative of the conclusions previously reached, namely, that the primary slowing of the pulse by veratroidia is due to a stimulant effect upon the inhibitory nerves. The vaso-motor nervous system having been paralyzed, and possibly the accelerators of the heart also, by the spinal section, full sway was left to the inhibitory nerves, and consequently in Experiment XVIII., where a minute dose of the alkaloid was thrown into the circulation, there was immediate diastolic arrest, and the singular phenomenon was offered of a heart, quiet, dilated, and seemingly dead, started into new life by division of the pneumogastric nerves,—*i.e.*, by removal of the inhibitory influence. The strength of the inhibitory apparatus is known to vary very much even in different individuals of the same species, and the diverse results reached in the last and the first of these experiments are merely instances of difference in degree and not in kind. The extraordinary rise and fall of the mercury in the cardiometer-tube, the incessant succession of cycles of diastolic cardiac arrest, prolongations of the beat, and hurried action of the heart, are explainable only upon the supposition that the inhibitory apparatus was intensely excited, but was unable to hold, as it were, the normal cardiac impulse completely in its power. The rapid alternations were, in other words, merely the varying phases of a struggle between the two forces or powers.

Upon examining the record of this last experiment, it will be seen that after the injection of a large dose of the alkaloid the alternations of low and high pressure ceased, and the mercury in the manometer became steady at a position much below normal. The most plausible explanation of this is that the excess of the poison changed a condition of inhibitory excitation into one of inhibitory paralysis, or, in other words, that whilst a small dose of veratroidia excites, a large one paralyzes the pneumogastriacs.

This explanation is strongly confirmed by the fact that coincident with the settling down of the pressure in the experiment just alluded to, there was a rise in the number of the pulse, and that section of the par vagum at this time did not affect the pulse-rate; a proof that the pneumogastriacs were really paralyzed.

In order, however, to establish beyond peradventure the truth of the proposition, the following experiments were performed:

Experiment XXI.—A very small dog.

TIME.	DOSE.	REMARKS.
0 m.	gr. I-40	Into femoral vein.
11 "	gr. I-40	" "
29 "	gr. I-20	" "
43 "	gr. I-20	" "
46 "		A current was applied to the pneumogastriacs (just cut), at first mild, afterwards very intense; no effect whatever was induced; the nerve was completely paralyzed.

Experiment XXII.—A young, stout pup.

TIME.	DOSE.	PULSE.	PRESSURE.	REMARKS.
0 m.	gr. I-40	130	90-100	Into femoral vein.
25 "	"			Cut pneumogastriacs.
25½ "	"	165	45-50	
28 "	"			Current to par vagum affected the heart very much.
32 "	gr. I-40		30-35	Into femoral vein.
34½ "	"	192		
35 "	"			Applied strong current to par vagum; no effect.
38 "	"	186	80-85	
40 "	"			Very strong current to par vagum.
40½ "	"	186	45-50	Current broken.
44 "	"		45-50	
65 "	"	186	38-52	Current applied to pneumogastriacs in the root of the neck where they had not been previously touched; no effect.

Experiment XXIII.—A stout terrier. Artificial respiration and small dose of woorari, just enough to quiet.

TIME.	DOSE.	PULSE.	PRESSURE.	REMARKS.
0 m.			85-95	
15 "	"		85-95	Cut pneumogastriacs.
21 "	"			Current applied to pneumogastriacs caused instant fall of pressure and prolonged diastolic arrest.
21½ "	"		15	
27 "	"	168	45-50	
30 "	gr. I-40		65-75	Injected into the peritoneal cavity.
39 "	gr. I-40		60-70	Injected as before.
47 "	"	189		

TIME.	DOSE.	PULSE.	PRESSURE.	REMARKS.
48 m.			15	Application of current as before caused diastolic arrest and fall.
53 "	gr. I-40		45-55	Into femoral vein.
61 "	"		20	Some fall under application of current to par vagum and slowing of pulse, but no diastolic arrest.
65 "	"		30-35	
68 "	"			A very intense current applied to the pneumogastriacs failed to influence the heart.

Experiment XXIV.

TIME.	DOSE.	PULSE.	PRESSURE.	REMARKS.
0 m.	gr. I-20		*15½-16	Artificial respiration resorted to, with exhibition of woorari in dose sufficient to keep the dog quiet.
6 "	"		10½-11	Injected into peritoneal cavity.
10 "	"			Pneumogastriacs cut. Canula changed to carotid artery.
20 "	"		10-12	
38 "	"		9-11	Under a strong current passed through the pneumogastriacs, which also slowed action of heart.
68 "	gr. I-10			Into peritoneal cavity.
90 "	"		9	Current applied to pneumogastriacs had no effect whatever. The arterial blood throughout this experiment was very dark and venous in appearance, owing to a leak in the bellows.

Experiment XXV.—A stout cur.

TIME.	DOSE.	PULSE.	PRESSURE.	REMARKS.
0 m.				Par vagum cut.
26 "	"	176	140-145	
48 "	"	0	0	Instant diastolic arrest from mild current to par vagum.
50 "	gr. I-40			Into femoral vein.
52 "	gr. I-20			Doubtful how much of these injections entered; some obstruction in the canula.
58 "	"	164	100-105	
64 "	gr. I-20	168	110-115	Into femoral vein.
75 "	"		85-90	Began artificial respiration.
84 "	gr. I-20	112	80-85	Into femoral vein.
91 "	"			Current of same strength as before to par vagum; at first no effect.
93 "	"	52	50-60	Current continued.
93¼ "	"			Current broken.
97 "	gr. I-20	84	75-80	
99 "	"	80	50-60	Very intense current applied to a freshly exposed portion of the pneumogastriacs, low down in the neck, had no effect whatever.

These experiments speak so plainly for themselves that a discussion of them is scarcely necessary. They are five in number, and in each case it will be noticed that after a full dose of the poison even the most intense faradaic currents applied to the pneumogastriacs failed to affect the heart. Every precaution was taken to prevent the possible fallacy of an exhaustion of the nerve by the current itself, and the teachings of the experiments must be received as final. It would have been very well to have tested the comparative sensibility of the par vagum before and after the injection of small doses

* In this experiment there was used a cardiometer with larger divisions of the scale than the one commonly employed.

of the poison, and thereby to have determined whether the inhibitory excitement primarily induced by such doses of the alkaloid is centric or peripheral. The doing of this, however, would have required an accurate determination of the minimum power of current required in the unpoisoned animal to influence the heart, and such determination necessitates the use of more delicate apparatus than was at hand. The final inhibitory paralysis is certainly peripheral; but whether the primary inhibitory stimulation is centric or peripheral must be left for other investigations to determine.

(To be continued.)

CONFLUENT SMALLPOX IN THE EIGHTH MONTH OF PREGNANCY—CHILD BORN WITH THE DISEASE—RECOVERY OF MOTHER AND CHILD.

BY A. TREGO SHERTZER, M.D.,

Baltimore, Md.

I WAS summoned to see Mrs. F., æt. 35, a regular patient, February 25, and found her suffering with the premonitory symptoms of smallpox: high fever, flushed countenance, throat slightly sore, loss of appetite, constipation, eyes injected, considerable pain in head and small of the back. She was eight and a half months advanced in pregnancy. After a careful examination, I ordered an ounce of castor-oil at once, and xylol. $\mathfrak{z}\text{i}$, mucil. acaciæ $\mathfrak{z}\text{ij}$. M. Sig., teaspoonful every four hours. After giving the general directions, and before leaving, I told Mr. F. the true state of affairs,—that in all probability his wife would miscarry, and that I might possibly lose both mother and child.

February 26.—I found Mrs. F. rather worse; she had not slept much during the night; bowels moved by oil; high fever, and no appetite. Ordered elix. val. ammon. $\mathfrak{z}\text{ij}$, morph. sulph. gr. ii. M. Sig., teaspoonful as required; with beef-tea, etc., and the same treatment to be continued.

February 27.—High fever and great thirst, for which I ordered a wineglassful of citrate of magnesia, three, four, or five times during the day. Slight eruption, and throat quite sore, for which I ordered a gargle; eyes sore and inflamed. Same treatment to be continued, and entire body to be sponged with hot vinegar and salt night and morning. Slept little during previous night.

February 28.—Rested badly; high fever, great thirst, tongue heavily coated, throat very sore, for which I used locally a solution of nitrate of silver, gr. x to aq. $\mathfrak{z}\text{i}$. Bowels constipated; entire person covered with eruption, and swollen. Same treatment continued, with the morphia mixture during the night, with beef-essence, brandy-and-water, and potassii chlor. $\mathfrak{z}\text{ss}$, pulv. alum. gr. xx, pulv. borac. gr. xx, sacch. albi $\mathfrak{z}\text{ss}$. M. Ft. chart. No. viii. Sig., one every four hours. I ordered a solution of elm to be applied to the eyes; also acid. carbolic. $\mathfrak{z}\text{i}$, oleum olivæ, glycerin, aa $\mathfrak{z}\text{iss}$. M. Sig., apply to face.

March 1.—Rested badly during previous night. High fever, great thirst; general appearance very puffy; literally covered with one mass of dark scabs; throat considerably ulcerated, and great difficulty in breathing and swallowing; complains of general pains, especially in abdominal region; eyes very sore, urine very high-colored and offensive, no appetite, and slight delirium. Applied a solution of nitrate of silver, gr. xx to aq. $\mathfrak{z}\text{i}$, to throat, and to continue powders. Con-

tinue the xylol mixture, with a wineglassful of citrate of magnesia every four hours. To have beef-essence with brandy-and-water. Tongue heavily coated and dry. Ordered the solution of elm to be kept over the eyes, and the mixture of carbolic acid, olive oil, and glycerin to be kept over the face, and the entire body to be sponged night and morning with hot vinegar and salt. Before leaving, I informed Mr. F. that his wife's case was assuming a very unfavorable aspect. At five o'clock same day I was sent for in haste, with a message that Mrs. F. was dying. My office being at least three miles distant, I drove in haste to her residence, and found her in a reclining position, gasping for breath. I saw at once the throat was closed, owing to the ulceration. Dipping the probang into the solution of nitrate of silver, I passed it down the throat, after which she spat out great flakes of muco-pus. Finding that her abdominal pains were greatly on the increase, I ordered hot hops and corn-meal poultices to be kept on the abdomen, and that the same treatment be continued, instructing Mr. F. how to use the probang.

March 2.—Rested very badly last night, although she took one grain of morph. sulph. in one ounce of elix. val. ammon. during the night. High fever, dry and coated tongue, and great thirst; whole body and face much swollen; eyes very sore and perfectly closed; throat very much ulcerated; general pains very severe, especially abdomen and thighs; tongue very dry and coated, mouth very sore; bowels opened during the night; urine very scanty, high-colored, and offensive. Continued same treatment, with poultices to abdomen, elm-solution to eyes; mopped her throat and sponged her off from head to feet with hot vinegar and salt.

March 3.—Little or no change in her condition; slept a little during the night, though quite delirious. Abdominal pains very severe. Continued same treatment, except morphia mixture; to have plenty of beef-essence and brandy-and-water. I told Mr. F. that it was very doubtful if I could save his wife, as her case was rather a hopeless one, and if the abdominal pains continued, to send for me, and I would rupture the membranes and deliver.

March 4.—With the use of heavy doses of brandy, slept well during the night; very little change in her condition; bowels moved. Continued the same treatment. At twelve o'clock at night Mr. F. came after me, stating that his wife was smothering, and the abdominal pains were so severe that she could not stand it. After cleaning her throat with the probang and solution of silver, I gave her half a grain of morphia and brandy, with the hot poultice to abdomen. After waiting some two hours, the pains continuing, I concluded to rupture the membranes and deliver; but upon finding her parts greatly swollen and sore, I concluded to give more morphia and brandy, and wait until morning.

March 5, 7 A.M.—Patient sound asleep. To have xylol mixture, beef-essence, hot poultices, and sponged. 6 P.M.—Patient much easier.

March 6.—Patient quite easy this morning. General appearance much better; rested some during the night. Bowels opened with the citrate of magnesia. Scabs commencing to fall off. To continue same treatment. The patient gradually improved, appetite returning.

March 8, 11 P.M.—I was sent for, and found her suffering with slight pains. I lay down in an adjoining room, and requested that I be called when wanted.

March 9.—At half-past eight o'clock regular pains came on. Prof. Byrd was sent for, who delivered her of a fully-developed son, which was literally covered with the eruption of smallpox. In due time—that is, in an hour or so after confinement—the infant was put to the breast, and the mother placed upon good, nourishing diet. From this time mother and infant commenced

to improve, and recovered, without a single trace of the disease, and they are now both living and doing well.

At the request of my friend Prof. Harvey L. Byrd, I took notes of the case, as we both considered it a very remarkable recovery.

A CASE OF PSEUDO-HYPERTROPHIC MUSCULAR PARALYSIS.

BY C. H. DRAKE, M.D.,

Scioto, Pa.

TO Duchenne of Boulogne belongs the honor of bringing this singular affection before the profession and giving to it a distinct clinical history. First applying the name "hypertrophic paraplegia of infancy," he afterwards substituted "pseudo-hypertrophic paralysis." Since then numerous observers have accurately described the disease, under various names. Niemeyer terms it "progressive muscular paralysis as a result of hypertrophy of the interstitial fatty tissue;" and Jaccoud proposes the term "progressive muscular sclerosis." The disease is evidently exceedingly rare, as but few cases have been placed on record. In this country the first recorded case is that of Drs. Ingalls and Webber (*Boston Med. and Surg. Journal*, Nov. 1870). Then a case by Dr. Pepper (*Phila. Med. Times*, June 15 and July 1, 1871). One by Dr. Mitchell (*Photographic Review*, Oct. 1871). One by E. M. Estrazulas (*Obstet. Journal of Great Britain and Ireland*, Am. Sup., page 81, Sept. 1873). Dr. Hammond (Treatise on Diseases of the Nervous System, 3d ed., page 699) describes one case as coming under his observation.

It is almost exclusively confined to children and young adults of the male sex.

The disease presents a curious train of symptoms, and when fully developed can scarcely be mistaken for or confounded with any other affection. In its incipency, however, the symptoms are obscure and the diagnosis difficult.

The following interesting case has been under my care for nearly a year. Various forms of treatment have been adopted and carefully carried out, but without apparent benefit, and the patient seems to be gradually losing ground.

A. B., 12 years of age, born in Monroe County, Pa.; mother healthy; father illegitimate, intemperate, always extremely eccentric in his habits, and for several years past quite insane. There is no history of syphilis, rheumatism, or gout. Two of patient's brothers died of what the mother calls "brain-fever," attended with convulsions; another died of consumption (?), two others of diphtheria, and another in infancy (cause of death not known). Six years ago the patient had a severe attack of "brain-fever," accompanied with violent and long-continued convulsions, and he has never enjoyed good health since. The present difficulty was first noticed about five years ago,—quite mild then; but he has gradually grown worse, so that now he can scarcely walk a short distance to school. His face and neck present no abnormal appearance, and he is quite cheerful. All the lateral and anterior abdominal muscles and those of the shoulders, back, and chest have undergone very great atrophic changes; there is marked sacro-lumbar incurvation, and when walking he throws the shoulders and

upper portion of the trunk far backward, balances himself on the metatarso-phalangeal articulations, elevates his heels, moves with a peculiar straddling step, can walk up a hill or stair only with great difficulty, and frequently pitches forward on his knees when attempting to increase his gait. When rising from a chair he throws the trunk forward, then grasps the thighs with his hands, and by a curious struggling movement assumes the erect position. His sleep is much disturbed, and he does not acquire knowledge as rapidly as other boys of his age; but his appetite is good, his bowels regular, the urinary secretion and body-temperature normal. There is increased action of the heart, amounting at times to severe palpitation, but there are no murmurs, and the ophthalmoscope reveals no changes in the fundus of the eyes. There is very decided hypertrophy of the muscles of the calves. Those of the fore-arms are also enlarged, but to a less degree, and quite recently I have noticed commencing enlargement of the muscles of the gluteal regions. The stomach and abdomen are distended and tympanitic, and there are large patches of dirty-brownish colorations on various parts of the body, giving the surface a marbled appearance. These patches are very irregular in form, are not sharply defined in their outline, but fade gradually into the natural color of the skin. His muscular strength is greatly impaired, being much less than that of his sister seven years of age. When eleven years and six months old he weighed sixty-one pounds. Quite recently (July, 1874) the following measurements were taken: height, 54 inches; right arm, greatest circumference, 6 inches; right fore-arm, greatest circumference, 6 inches; left arm, greatest circumference, 6 inches; left fore-arm, greatest circumference, 6½ inches; right thigh, greatest circumference, 12½ inches; right calf, greatest circumference, 13 inches; left thigh, greatest circumference, 12½ inches; left calf, greatest circumference, 12½ inches; around the buttocks, 23 inches.

There is a certain train of symptoms in pseudo-hypertrophic paralysis, more or less well marked, in every fully-developed case recorded; then there are other symptoms which are not constant, but are found only in certain cases. Mottling or coloration of the skin, for instance, which has been noticed in some of the cases described, in others did not exist. In Dr. Pepper's case, which, by the way, was a typical one, no change of color could be detected on any part of the surface. In the case of the lad A. B., however, there are a large number of irregular, ill-defined patches, some of them quite dark, and easily seen at a distance of ten or fifteen feet, while others are pale and indistinct. Nine months ago these spots were plainest over the stomach and abdomen, but they have gradually grown paler in these regions, while the skin over the pectoral muscles, which was of natural color when the patient was first seen, has assumed a muddy hue. I am inclined to the opinion that this mottling of the skin takes place only over the muscles while they are undergoing atrophic change, and that when this action ceases, and especially if a condition of pseudo-hypertrophy succeeds, the skin slowly assumes its normal color.

Apparent hypertrophy of certain muscles, usually those of the calves and fore-arms, is a prominent and very constant symptom. In the case of A. B. the gastrocnemii are greatly enlarged. They present a knotty appearance, and feel firm and elastic.

Anterior sacro-lumbar curvature, a tendency to

talipes equinus, and a slow wasting of certain muscles and groups of muscles, are seen in every instance. The walk is peculiar. Persons afflicted with this disease "waddle" along like a duck, and experience great difficulty in ascending elevations. My patient uses his arms quite as much as his legs in locomotion. He rapidly elevates and depresses them, like a gymnast walking a tight-rope.

At times he complains of pain of an acute character in the calves; aside from this he is free of pain, and has no tingling or sensation of numbness.

July 29, 1874.

CASE OF INFANTILE CONVULSIONS TREATED BY HYDRATE OF CHLORAL.

BY JAMES D. MCGAUGHEY, M.D.,

Wallingford, Conn.

I ATTENDED a case of eclampsia several weeks ago in a little child nineteen months old, healthy and well nourished, but of a hereditary super-sensitive nervous system. Several children of the same family died in convulsions. The parents are healthy, with the exception of a little malarial fever occasionally. The first time the child was attacked, several teeth were pressing upon the gums, which were promptly lanced; but the convulsions continued five or six hours afterwards. This first attack was severe, but was controlled principally by bromide of potassium and thorough bathing, with application to spine and antispasmodic injections. The little patient having some evidence of malaria about him as the exciting cause of the convulsions, and the fever being paroxysmal, I put him upon a quinine treatment, with marked improvement. In about a week the quinia was omitted and the child was attacked again with eclampsia, worse than ever. The convulsion seemed to be principally of the left side, and lasted from 6 P.M. until 6 A.M. without any intermission. I tried every measure I could possibly think of to relax the spasms: systematic bathing, nausea and vomiting were produced, the bowels were freely acted upon, stimulating and antispasmodic injections were administered, mustard and garlic to spine, ice to the head, bromide of potassium internally, also valerian and assafoetida, but all to no purpose: the spasms continued unabated; the child seemed to be getting worse, the skin growing hotter, pulse more rapid, and the clonic, almost tonic, rigidity of the muscles greater; the eyes were staring, with balls rolled up or oscillating from side to side. About three o'clock in the morning, all treatment having failed to produce any impression whatever, I determined to try chloral. I had never seen that article recommended in infantile convulsions, yet knowing its therapeutic power it seemed very reasonable to me that it would answer the purpose exactly, as I needed a prompt and efficient remedy. I was satisfied the child could not survive unless quickly relieved, and the longer the convulsions continued the greater subsequent danger and fear, even though the eclampsia should be controlled. I did not suc-

ceed in getting the medicine until near four o'clock. I gave the following prescription:

R Hydrat. chloral., gr. ij;
Fl. ext. valerian., fʒi;
Aquæ gaultheriæ, fʒiii;
Aquæ dest., q. s. ad ʒi.

Of this mixture I gave a teaspoonful every hour. I administered two doses, and the first perceptible effect I noticed was a relaxation of the spasm about the muscles of the eyes, the lids closing for a while, then reopening, followed by closing again, showing a tendency to sleep. The pulse became less frequent, and the skin somewhat cooler. The child being somewhat better, with a fair prospect of coming out of the convulsion, and being greatly fatigued myself, I gave some directions, and went home. After my departure, the father, seeing the good effects of the medicine, gave another teaspoonful, and in a short time the child was fast asleep, and awoke in an hour or two perfectly free from spasms.

This is the only case in which I have tried the chloral in infantile convulsions, but I think it is one which, considering the thorough treatment previous to its use, exhibits its wonderful powers in allaying spasms. Its effects were prompt and unmistakable. I think that in those cases of convulsions complicating whooping-cough and pneumonitis it will prove more successful than bromide of potassium.

DOUBLE VAGINA AND NECK OF THE UTERUS.

BY CHARLES D. GREEN, M.D.

MRS. A. L., from Sussex County, Delaware, while stopping in the city recently, was taken suddenly ill with uterine hemorrhage. She was 39 years of age. Her husband stated that they had been married eleven years, and this was her first pregnancy, and that neither of them had discovered anything unusual, more than that the vaginal canal was very narrow.

On making per-vaginam examination, I found a tumor occupying the vaginal passage, but could not at first make out its precise character, as I could not discover the os uteri,—in fact, could not find any approach to the natural formation.

Between the labia and nymphæ on the right side, as high up as the meatus urinarius, I discovered an opening, which communicated with a large space where was lodged a foetal mass, and above this the neck of the uterus. I enlarged this opening by pushing my finger forward, and found near the neck a communication with the second vagina which I had first examined. The septum separating the two canals extended from the vulva to the os uteri, four and a half to five inches in length and one-fourth of an inch thick.

The vagina that was continuous with the neck of the uterus could not admit the passage of the foetus, whilst the one which corresponded with the well-formed vulva terminated in a cul-de-sac.

Close to the neck, at the end of the septum,

there was a small opening, through which the semen had most probably found its way to the uterus.

The exhaustion of the woman from hemorrhage showed there was no time to lose, and I determined to divide the septum and remove the foetal mass. With a waxed thread and watch-spring, I passed Krammer's silver Eustachean catheter close up to the neck of the uterus, through the lateral fissure of the septum, then, turning its point towards the external opening, seized the thread with a forceps, and tied it firmly a quarter of an inch below the meatus urinarius. I passed a second thread in the same way and tied it as near as possible to the perineum, leaving between the two ligatures an interval of one-third of an inch for the division of the septum, which was divided with scissors on the point of my finger as far up as the neck of the uterus.

The cure was complete by the fifteenth day. At this time examination per vaginam revealed two openings leading to the neck of the uterus, united by a thin membrane, and so placed that after the finger is introduced into one opening the other is not perceived by the side of it. The uterus is single.

PHILADELPHIA, August 6, 1874.

THE "PINES" OF NEW JERSEY AS A RESIDENCE FOR PATIENTS WITH PULMONARY DISEASE.

BY JOHN R. STEVENSON, M.D.

AS the physician from Philadelphia rides over the Camden and Atlantic Railroad on his way to the "city by the sea," he notices, after an hour's ride, a remarkable change in the appearance of the country. From well-cultivated fields, interspersed with patches of fine forest-trees, he emerges gradually, as he approaches the station of Berlin, seventeen miles from the river, into a barren country where the white sand is covered with dwarf oaks (*Quercus elongata* and *triloba*), and pines (*Pinus inops*), and the huckleberry (*Vaccinium resinum* and *corymbosum*); and if it be the month of June, his eyes will be relieved by the bloom of the laurel and the magnolia. Through this country, dotted with here and there a settlement like an oasis in the desert, he rides for another hour until he emerges upon the meadows of the coast, and wonders for what purpose such a land was created, and whether nature's economy would not be better served if the whole of it were again sunk to the bottom of the ocean from which it came forth.

It is to this section of New Jersey, familiarly called by the natives the "Pines," that I wish to invite the attention of the profession. Geographically, it is the Atlantic slope of that State, which, beginning in the upper part of Cape May County in the south, extends in length ninety miles north to Monmouth County in the northeastern end of the State; and in width, from the sea-coast to the valley of the Delaware, a varying breadth, whose greatest distance is along the Camden and Atlantic Railroad, about forty miles. The valley of the lower Delaware, about eighteen to twenty miles wide, is separated from it by a ridge or elevation, whose greatest height is

about three hundred feet above the level of the sea; from this ridge water-courses run in two directions, the one leading to the Delaware River, the other to the ocean. This flat plain has a soil of coarse white sand, from six to twelve inches in depth, resting upon a bed of gravel or clay. It is abundantly supplied with water from numerous springs and rivulets, which in many places overflow the lower portions of the land, forming great swamps, which were originally covered with a growth of cypress (*Cupressus thyoides* and *disticha*), trees famous for their size and the durability of their wood, but are now mostly supplanted by the stunted oak and pine, through which still roam the deer and an occasional bear. The water of these springs and streams is peculiar, having a sweet pleasant taste and a brown or red color, giving to the hand, when thrust into it, the appearance of being bloody. It is called, in that country, "cedar-swamp water," and has the reputation there of being very healthy both to drink and to bathe in.

The climate is milder and more uniform than it is in the same parallel of latitude west of it, as the extreme heat of summer and cold of winter are materially modified by the proximity of the ocean and by the slope of the land to the southeast. This is shown not only by direct observation, but also by the character of the flora, which is essentially different from that of adjacent Pennsylvania, and is similar to that of Virginia and the Carolinas. A peculiarity about this locality is that malarial diseases are unknown, even along the streams and in the swamps, while in the Delaware valley malaria is prevalent, in a mild form, along all the water-courses that empty into that river.

From the earliest settlement of West Jersey, tradition has fixed in the minds of the natives a strong belief in the healthfulness of the "Pines," especially its beneficial effects upon diseases of the pulmonary organs; but as, until within a few years, the land, believed to be barren and worthless, was almost uninhabited except by wood-choppers and charcoal-burners, little was definitely known about it, except that occasionally an individual laboring under pulmonary disease, who was forced by business to spend some time there, found that his health had very rapidly improved.

The opening of the Camden and Atlantic Railroad, twenty years ago, and subsequently the building of the Cape May and the New Jersey Southern Railroads, furnishing facilities for reaching this country, induced an immigration into it, which proved two facts, one of which is that the land is highly productive for fruit, and the other that it is a desirable place of residence for sufferers with pulmonary complaints. The last has become so well known throughout some portions of our country, particularly in New England and Northern New York, that two large settlements—Hammonton, on the Camden and Atlantic Railroad, and Vineland, on the Cape May Railroad—have been formed largely of persons seeking this favorable climate for the relief of those affections.

My attention was called to these facts during 1863 and 1864, while acting as the examining sur-

geon in West Jersey for the government, to examine drafted men and volunteers for the army. During this time, about three-fourths of all the men between twenty-one and forty-five years of age, residing in that section of the "Pines" south of the line of Burlington County, came before me for physical examination, and were found to be remarkably free from pulmonary diseases, except the very large number of settlers who had moved there because suffering from them. I took especial pains to question them about their experience of the effects of the climate, and was almost invariably told that they had been greatly benefited, and many had entirely recovered. Since then, a number of cases have come under my observation of marked benefit resulting from a residence there; but space does not permit an account of them.

The professional testimony concerning the climatic influences of this section is limited, because, until recently, but few physicians lived in it; but those who have practised there say that pulmonary diseases are not common. Dr. John W. Snowden, of Waterford Works on the Camden and Atlantic Railroad, one of the most intelligent and accomplished physicians in the State, who has practised in the "Pines" for a quarter of a century, wrote to me a few years ago, in reply to inquiries upon this subject, that "phthisis is decidedly infrequent among our native population; chronic bronchial affections are not frequent; strangers laboring under pulmonary diseases are very decidedly benefited while here." Dr. W. L. Newell, of Millville, wrote, "I do not consider phthisis frequent among our native population. I would say the same of chronic bronchial affections generally." Dr. J. K. Pitney, formerly of Absecum, said substantially the same.

Why should this part of our country be peculiarly adapted to invalids with lung-diseases? An answer to this question might be inferred from the characteristics of the land as described above, but Dr. Snowden admirably states the causes which act beneficially. He says, "I consider the terebinthinate matter in the air, and with which the 'cedar-swamp water' is more or less impregnated,—the latter being drunk usually by invalids,—and the dryness of the atmosphere consequent upon a dry, sandy soil, as the chief causes of benefit in these cases. To these may be added a moderate climate, not subject to such great extremes of temperature as more inland territory, and immunity from malarial and other endemic diseases that weaken the body and thus frequently develop hereditary tubercles or hasten their fatal termination."

Having thus shown that we have a suitable climate for invalids with pulmonary diseases, close to the great cities of Philadelphia and New York, a few economic reasons why physicians in the Eastern and Middle States should recommend it over more distant and doubtful localities may not be out of place. The wealthy consumptive alone can visit Florida, Minnesota, and Colorado, and too often only to die away from home and friends; but in this part of New Jersey, where land can be bought for from five to twenty-five dollars per acre, he of moderate means

or of little means can take up his residence, have his family around him in his own home, with daily access to and from the business, schools, and other conveniences of the great cities, by means of the numerous railroads and the ever-increasing number of trains run over them. Chronic pulmonary disease cannot be cured by a short visit in a suitable climate, but only by a prolonged stay in it, and frequently a permanent residence alone will prevent a return of the complaint. There in the "Pines" will be found a cheap home and a healthy climate within easy reach of the pleasures and luxuries of the cities.

CHLORAL HYDRATE AND BROMIDE OF POTASSIUM IN SPASMODIC ASTHMA.

BY JULIO J. LAMADRID, M.D.

THE following two cases are of interest on account of the prompt and decided relief which the patients experienced. So far as I know, the above remedies have seldom or never been tried or given together.

On the 7th of January, 1874, I was called during the night to visit Mrs. Jacob B., aged 35. Upon arriving at the house I found the patient sitting at the edge of her bed, with her head and shoulders bent forward, and suffering with the usual symptoms of spasmodic asthma. In addition to this she would point to her hands and feet, showing that those parts were also affected by these spasmodic contractions or cramps. I gave her a hypodermic injection of the sulphates of morphia and atropia together (one-fourth of a grain of the former and one-ninety-sixth of the latter): this seemed to relieve her at once. I also prescribed for her a mixture containing some of the strongest antispasmodics of the materia medica. I called early next morning, but found that the patient was not much relieved. I then ordered a mixture of linimentum chloroformi (B. P.), oleum terebinthinæ, and tinct. capsici, to be rubbed well on her chest from time to time with the hand or a towel, and gave another hypodermic injection of morphia and atropia. At 10½ P.M. I was called again in a great hurry; her husband said she fell asleep soon after I left the house, and slept for three or four hours, and from that time seemed to be quite easy and comfortable, but about 9½ P.M. the dyspnœa came on again as bad as ever, if not worse. This time I advised her husband to throw the smoke of a cigar in her face: this seemed to relieve her so much that she insisted upon its repetition, but of course this could not last long. The smoke from some blotting-paper previously soaked in a solution of nitrate of potassium also gave relief for a time. This failing, I decided to give twenty grains of bromide of potassium and ten grains of chloral. I used the following formula:

℞ Chloral. hydrat., 3v;
Potassii bromid., ʒiiss;
Syr. flores aurantii,
Aq. dest., aa fʒi.—M.

Sig.—Take a teaspoonful in half a wineglass of water every two hours, until sleep is induced or dyspnœa is relieved.

In less than an hour the patient began to feel the effects of the remedy, and when the time came for her to take another dose she was almost free from the dyspnœa and the cramps; soon after taking the second dose the patient fell into a sound and peaceful sleep, which lasted till next morning. She continued the use of the bromide of potassium alone in ten-grain doses,

three times a day, for a few days, and since then she has been free from these attacks.

Case II.—Harriet S., aged 65, a widow, and mother of eleven children, sent for me on the 3d of July, 1874, at 10½ P.M. I found her laboring under a severe attack of spasmodic asthma, to which she was subject. A hypodermic injection of morphia and atropia and antispasmodics gave her some relief, so that she was able to sleep the rest of the night. The next morning at 9 A.M. she still complained of a little dyspnœa; advised to continue the antispasmodics. At 8 P.M. she had another attack; I now ordered the hydrate of chloral in fifteen-grain and the bromide of potassium in ten-grain doses, to be repeated in an hour if not relieved. She had slept all night after taking the second dose, and next day was feeling quite comfortable and free from the dyspnœa. She also continued taking the bromide of potassium alone, and as yet she has not had any more attacks.

NOTE.—Since writing the above for publication in the *Philadelphia Medical Times*, I have received the *Medical News and Library* for August 1, 1874, and *Braithwaite's Retrospect*. In either of these journals the readers of the *Medical Times* will find an article upon this subject. In the former, Dr. C. Theodore Williams (*British Medical Journal*, June 13, 1874) speaks very highly of chloral in asthma, and in the latter Dr. Anstie (*The Practitioner*, January 7, p. 19, 1874) remarks that bromide of potassium is a powerful remedy in spasmodic disease.

It seems, therefore, from the above remarks that my own observations or experiments are independent of any others made in this country, and that I may justly claim the priority of its use in this disease; while on the other hand the two articles already referred to will show and confirm the truth of my own statement, and the value of these two agents combined together in the treatment of spasmodic asthma.

BROOKLYN, July 7, 1874.

TRANSLATIONS.

PHYSIOLOGICAL RESULTS OF THE TRANSFUSION OF BLOOD (*Centralblatt für Chirurgie*).—A. Jakowicki endeavors to answer the following queries by experimental research:

1. As to the influence of blood transfused from the same species as compared with that of blood from animals of other species.
2. What influence has transfused blood the corpuscles of which have been destroyed, and what influence have solutions of hæmoglobin?
3. What is the relation of the fibrin-producing ferment in transfusion?

The experiments were conducted on cats and dogs, and, in the attempt to answer the first query, large quantities of blood were drawn from the vessels of an animal, and replaced by like quantities of defibrinated blood from animals of the same species. As the amount of blood which was allowed to remain in the vessels of the animal was too small to permit of the functions necessary to life being carried on, it was assumed that the defibrinated blood took this rôle. Exudations of the defibrinated blood into the tissue as observed by Magendie were not noticed in these experiments. In opposition to the results obtained by Gesellius in St. Petersburg in 1873, Jakowicki noticed that blood from animals of another species, whether intro-

duced just as drawn from the vessels of the animal or as defibrinated blood, speedily induced decomposition of the blood of the animal subjected to experiment. The urine soon became tinged with blood, as well as the fæces and the matters vomited. The color of the urine was not due to blood-corpuscles, but to coloring-matter of the blood in solution in the urine. If small quantities of foreign blood were injected, the urine gradually cleared up, lost its albumen, and returned to its normal state; while if blood of this character was injected in large amounts, the animals soon died. By the injection of serum, it was established that albumen found in the urine after transfusion must have its origin in the serum of the foreign blood injected.

In the experiments conducted to afford an answer to the second query, the solution of the blood-corpuscles was effected—1, by repeated freezing of the blood; 2, by agitation of the blood with small quantities of ether, and, 3, by agitation with water. In addition to blood altered by these methods, solutions of crystals of hæmoglobin were used. After injections of these fluids there was noticed in some cases the production of clots, but frequently there were no clots produced, but only those symptoms in a somewhat milder form which are also due to the injection of blood of other species of animals. From this it was concluded that the serum of foreign blood increased the deleterious influence of the dissolved coloring-matter of the blood.

In answer to the third query, he concludes—1, that even noticeable amounts of the solution of the ferment when injected into animals are not able to produce coagulation of the blood in the vessels of the living animal; 2, the longer the injected ferment remains in the blood the less is its quantity, and it is safe to suppose that at the expiration of twenty-four hours it has entirely vanished; but the blood still contains some ferment even for a considerable time after the performance of transfusion, and there is some present even when transfusion has not been performed; 3, the respiratory process does not appear to have any influence upon the elimination of the ferment; 4, it is not possible to find any ferment inducing the production of fibrin in the urine, but in that secretion there is found a ferment similar to diastase. The suggestion is made that the fibrin-producing ferment may be the original form of all the ferments of the animal organism, and that it may enter the glands with the blood, and there be converted into the specific ferments. W. A.

NEUROMA MULTIPLEX.—Prof. Kosinski gives (*Centralblatt für Chirurgie*) the following account of a case of neuroma which was treated by neurotomy with the happiest results. The patient, a man aged 30 years, was admitted into the hospital in March, 1872, on account of painful tubercles on the lower extremities. He then stated that the tubercles made their appearance in his sixteenth year, and were at first small and painless, but that later, when he, as a soldier, was compelled to make extended marches, they began to increase in size and to become painful. At the first examination it was found that the posterior and outer sides of the thigh down to the lower third, and also a portion of the surface of the buttocks, were covered with scattered tubercles, round or oval in shape, and varying in dimensions from the size of a pin's head to that of a hazel-nut.

These tubercles had their seat apparently in the corium, and were for the most part hard to the touch. The layers were, however, elastic and semi-transparent, and had their edges more sharply defined from the surrounding skin than those of smaller size. The skin covering them was dry and uneven, and covered with an epidermis which was more scaly than normal. When pressure was made upon the tubercles, more

especially upon the larger ones, intense radiating pain was caused, but when the patient was in a state of complete repose his sufferings were much less.

In order to find out the nature of these growths, which outwardly presented the appearance of tumors formed of connective tissue, two of the largest and most painful tubercles were cut out and examined with the microscope, and were found to be composed of nerve-fibres and connective tissue. The cutaneous endings of the nerve-fibres were in the tubercles, and the parts involved corresponded to the parts supplied by ramifications of the lesser ischiatic and a portion of the fibres of the external cutaneous nerves.

The medical treatment with mercury, iodine, etc., which had been attempted in this case, had proved entirely without effect; and as it was not possible to excise all the growths with the knife, or destroy them with caustics, it was determined to do away with the sensibility of the tubercles by the excision of a portion of the nerve-trunk whence the filaments supplying them were derived. In order to effect this, an oblique incision, running nearly in the direction of the gluteal fold, was made, and, the nerve having been reached, a portion of it, about one inch in length, was cut out. Preference was given to the oblique line of incision over the perpendicular, since it permitted the nerve-trunk to be found more readily. The immediate result of the operation was a loss of sensibility in the tubercles themselves, as well as in the region in which they were situated. Some of the tumors, however, especially those to the front and outer side of the thigh, still manifested sensibility, but to a less degree than before the operation. As the wound began to heal by granulation, the tubercles began to disappear, and this process went on with such rapidity that at the close of the four weeks which the patient spent in the ward, the larger tubercles were diminished to half their previous size, while those of smaller dimensions had vanished almost completely.

Four months later, it was found that this process of absorption had continued, and that the remains of the tubercles which still existed occasioned the patient no pain.

Prof. Kosinski thinks that this case is of interest in the following respects: 1, the diagnosis could only be made with certainty by the aid of the microscope; 2, that so far as his knowledge extends there is no case of neurotomy with tumors of this character upon record; and, 3, the results of the operation were so far in excess of his expectation. The rapid disappearance of the tumors consequent upon the nerve-section may also be of interest to the physiologist, since it points out the influence of the sensory nerves upon the nutrition of the tissues.

W. A.

TREATMENT OF PHIMOSIS BY MEANS OF THE GALVANIC CAUTERY (*Gazette des Hôpitaux*).—Amussat now employs in the operation for phimosis the galvanic cautery, and six cases are reported, in each of which the operation was thus performed with some slight modification of the details. The patients were usually operated on in a sitting posture, but children were placed under the influence of chloroform and laid upon a bed. A shield of boxwood was passed between the prepuce and the upper surface of the glans penis, and a perforation of the prepuce was then made by means of a trocar of appropriate size. A platinum wire having been passed through the trocar, this instrument is to be withdrawn. An assistant then fixes the penis and the boxwood shield, the wire is connected with the galvanic apparatus, and the operator with the heated wire cuts through the foreskin from behind forward. It is not necessary to employ a trocar in the perforation of the prepuce; the same object can be attained by using a

curved needle through the eye of which the platinum wire has been passed. The wire, too, can be substituted by the bistoury used in galvano-caustic operations, and when this is employed the operator grasps the penis in the left hand and cuts through the prepuce upon the wooden shield from without inwards.

A linear separation of the prepuce can also be effected by placing it directly between the two branches of a galvanic forceps, about ten minutes being required for the operation when thus performed. This mode of operating is attended by no loss of blood, and the wound is usually healed at the expiration of from three to five weeks. As a rule it is only necessary to cut through the superior part of the foreskin; but if a lateral incision or division of the frænulum is needed it can be effected in a similar manner.

W. A.

INFLUENCE OF THE INHALATION OF CHLOROFORM BY THE PARTURIENT WOMAN UPON THE FÆTUS.—Zweifel (*Berlin. Klin. Wochenschrift*) has proved by examinations of the placenta and by examination of the urine of newly-born infants that chloroform given to the mother by inhalation can pass into the fetal circulation, and thus the child in utero may be chloroformed.

W. A.

THERAPEUTIC NOTES.

OTORRŒA.—M. Ménière recommends in "earache" the use of leeches, with the following solution:

R Aconitiæ, gr. i;
Aquæ, f3v.—M.

In chronic otorrhœa inject the external meatus freely with tepid water, and paint once a day with—

R Acid. carbolic., gr. i;
Glycerin., f3i.

Three to six drops of the following solution may be allowed to fall into the ear and remain for eight or ten minutes:

R Zinci sulph., gr. iv;
Glycerin., f3ii;
Aquæ, f3vi.—M.

When great vascularity of the bottom of the ear exists, or even when there is perforation of the tympanum, use—

R Plumbi acetat., gr. ss ad i;
Aquæ, f3ss.—M.

—*The Doctor*, August 1, 1874.

DIGITALIS IN THE TREATMENT OF HÆMOPTYSIS.—Dr. Reboul has been in the habit of using for some time past large doses of digitalis in the treatment of hæmoptysis. The formula employed by him is as follows:

R Pulv. digitalis, 3ss ad 3i;
Aquæ, 3viss.

Make an infusion, and add 3x syr. limonis. Dose, a tablespoonful every hour, to be suspended should nausea and vomiting supervene. This treatment is peculiarly efficacious in hæmoptysis occurring during the feverish stage of phthisis.

ANTI-SYPHILITIC GARGLE (*Langlébert*).—

R Tinct. iodinii, 3ss;
Aq. destillat., 3viss;
Syr. aurantii, 3iss.—M.

Useful in mucous patches and secondary ulcerations of the lips and buccal cavity. This gargle is preferable to those containing corrosive sublimate, which blacken the teeth. If the ulcerations are rebellious, they may be touched lightly with the acid nitrate of mercury.

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EDITORIAL.

WANTED—LEADERS FOR A NEW CRUSADE.

FEW of the folk-movements of modern times have made more noise, been urged more pertinaciously, or created more disgust, than the so-called "woman's-rights movement." With its ultra developments we sympathize no more closely than does the most conservative reader of the *Times*. Rooted in the very groundwork of the sexual characteristics of a typical man, it seems to us, must be an antipathy to the hard-featured, loud-tongued, masculine woman fitted by nature for the platform and the hustings. The perfect type of woman is undoubtedly feminine and domestic, and such alone nature ordains as attractive to the typical masculine man. By the moralist the extreme woman's-right movement must be looked upon with suspicion, as, if he be not blind, he sees how closely it approaches in the doctrines and the practices of some of its foremost promoters to the brutish creed of "free love." Yet, in spite of the repugnance so widely felt, in spite of the taint of impurity, the movement still appears to have vitality, and in a measure to prosper.

The reason of this is obvious. Undoubtedly women in the past have not had that which is their due, and if now in the family and during prosperity homage is generally yielded them, yet when adversity comes, and the woman is thrown upon her own

resources, the tale too often grows sad, and she enters too often upon the tragedy of a struggle for mere existence. The world may be hard, yet the heart of the world feels pity for the wrong and woe of classes; and it is the underlying sentiment that those women who are forced to earn their daily bread very generally lead a life of excessive unrequited toil and anxiety, which has given vitality to this woman's-rights movement. Every right-minded man must sympathize with any effort to open new avenues for suitable employment to women. The opposition to some specific movements having this intent certainly has arisen from the conviction that woman was unfitted by nature for the positions into which she was being forced, and from the belief that nothing but evil could in the long run result from the effort to put a square peg into a round hole.

Likely enough our readers have already surmised that we are approaching the subject of "women-doctors." In this, however, they are partially mistaken. It appears to us that the time for discussion of this subject has gone by: the experiment is being made, and by its results before the lay public the movement will stand or fall.

We may confess, in passing, to a want of faith in the general adaptability of the sex to the calling of the physician, but really desire to call attention to a very curious anomaly in connection with the matter. Loudly, pertinaciously, has the battle been fought for the sex to enable it to enter upon an employment which requires the coolest of heads and the calmest of nerves to meet its emergencies, the wisest of judgments to solve its problems, and great physical powers to pass through its toils and withstand its exposure. So true are these things, indeed, that the most violent advocate of women-doctors must acknowledge that the great bulk of professional work will always be done by men; that in the army and the navy, as well as in the civil life of many country districts, women can take practically no part, and that in the city they can occupy only a section of the ground.

Closely allied to the medical profession is one requiring no cool head and calm nerves for trying moments, no clear judgment for times of doubt, no physical powers to bear active toil and exposure; a profession well paid, sedentary, requiring for reasonable success only a fair measure of intelligence and some special training and education. Yet the male pharmacist sleeps the sleep of undisputed possession: no nightmare of Mrs. Partington's sweeping his sex from the old fields of labor breaks his rest; no vision of displacement haunts his day. With the

Mohammedan fatalist he can cry, Mawsh Awllaw! "God be praised!" as he views the quiet of his own domicile and the inroads upon those of his brethren.

Why this is, it is difficult to say. It is possible that some of the earliest promoters of the "woman-doctor movement" were women who preferred noise to quiet, publicity to domestic life, and the supposed *éclat* of the medical profession to the more retiring, if not less remunerative, work of the pharmacist.

Whatever the causes may have been, the fact remains that women-druggists do not exist in America; and we are glad to see that in England this new avenue of employment for the sex is opening up. The right of women, who have successfully passed the usual examinations, to receive certificates, to become licentiates of the Society of Apothecaries in England, and to practise as apothecaries, is fully recognized by the new Apothecaries Act passed by the British Parliament, which received the royal assent a few weeks since.

We can see no reason why the male druggist or druggist's clerk shall not be in great part replaced by his sister in the trade. It is true that we have known those who would not hesitate to trust their lives to female physicians declare, with strange inconsistency, that women-druggists would make mistakes; that they are not careful enough. The major certainly embraces the minor, and he or she who is not careful enough to become a druggist is still more unfit to be a physician.

It may be that a woman rarely or never makes bread twice alike, or two shirts that are exactly similar; but, even if it be true that in ordinary life woman is not so accurate as man, is it not equally true that the difference is more the result of diversity of training than of inherent personal characteristics? We firmly believe that women can be trained to be careful and accurate. The hand that untaught can be trusted with the poison at the bedside certainly can be educated to handle the same materials at the dispensing-counter.

Why should not women be admitted to our colleges of pharmacy? No nude anatomy, no discussion of sexual problems, nothing that need tinge the cheek of modesty, is necessary there; and side by side without taint and without even inconvenience ought it to be possible to co-educate the sexes in pharmacy and materia medica.

Let us trust that a little of that energy which has been employed in thrusting woman into those positions for which she is at least doubtfully fitted by nature may be diverted into this seemingly safe channel of effort.

CORRESPONDENCE.

TO THE EDITOR OF THE PHILADELPHIA MEDICAL TIMES:

DEAR SIR,—I have been incited by the very interesting record of the performances of the dog Carlo, to give your readers a brief account of an instance of remarkable guessing powers in a spaniel. The incident seems to necessitate the possession, in a high degree, of both imagination and reasoning powers by the brute. For the truth of the narration I can vouch. The dog was an exceedingly sagacious one, and had already been taught a number of English words, as hat, handkerchief, etc.,—going for those articles when sent. One evening, his master, sitting in a front chamber, said, "Now I will teach Sport to fetch my slippers," and, commencing to take off his boots, told the dog to go to the next room for those articles. Sport instantly set off, but brought a work-basket or some other indifferent article, and was sent back, only to bring a cushion. By this time the master had got off his boots, and when he said, "No, no," to Sport, the latter stood still for a minute or two, seemingly in thought, and then suddenly, his face lighting up, sprang, with a suppressed bark, into the next room, and in a moment came back wagging his tail, with a night-shirt in his mouth. The dog had frequently seen his master undressing, and had, without doubt, thought that taking off the boots was the commencement of that process, and reasoned that a *robe de nuit* was the desideratum. That his actions were not the result of a mere coincidental chance is shown by the circumstance that the night-shirt was kept, with other things, in a closed box on the top of a sort of rack, so that the dog to get it was forced to climb up to the box, raise the lid with his nose, and search out the garment from amidst the other things. It only remains to add that Sport learned, once for all, that night, what "Fetch my slippers" meant; not, however, until he had brought out nearly everything else in the room.

Yours, etc.,

H. C. WOOD, JR.

SELECTIONS.

PROLAPSE OF THE UMBILICAL CORD.

DR. GEORGE J. ENGELMANN sums up a paper (*The American Journal of Obstetrics*, August, 1874) as follows:—In conclusion, I will sum up in a few words the facts attained and the laws established by the examination of our prolapse cases.

The causes of the prolapse of the umbilical cord have mainly proved to be such circumstances as prevent the complete filling of the pelvic brim, and the close adaptation of the lower segment of the uterus to the presenting part. One of the more important of these circumstances is the shape of the presenting foetal part itself, and we thus find that foot-presentations are most frequently complicated by prolapse, whereas vertex-presentations are least threatened.

The foetal appendages are of secondary and minor importance: undue length of the cord, its marginal insertion, or attachment of the placenta low down in the

uterus, can never be direct causes of the accident; excess of liquor amnii is alone to be feared.

Some stress is to be laid on abnormality in shape and position of the womb, much more upon twin births. More dangerous than any of these is the contracted pelvis, which I have proved by measurements and numbers to be the main cause of prolapse of the funis, directly and indirectly; a fact hitherto generally accepted, but never as yet clearly established. Another such vague general statement, that the prolapse is by far more frequent among multiparæ than among primiparæ, our cases disprove; they show that primiparæ are, comparatively speaking, almost as frequently afflicted as multiparæ.

The law governing the location of the prolapse is of importance, and here for the first time touched upon: it will, I trust, be verified by the investigation of other observers.

The post-mortem examinations revealed only the lesions due to death from asphyxia, nothing characteristic for death caused by prolapse of the cord.

The prognosis we can give is somewhat better than generally allowed; most favorable for foot-presentations, after these for shoulder and transverse presentations, while vertex-presentations are more dangerous than any; the case being, under all circumstances, more threatening when occurring in a primipara.

In the treatment of our cases the high importance of the postural method has been developed, more as an adjuvant, however, than as a method in itself of dealing with the prolapse.

Version is comparatively the most successful of all operations, and should be more frequently resorted to when any choice of method is given, as in head-presentations: the application of the forceps and reposition of the cord are less to be relied upon; but, whatever may be the course determined upon, it must be borne in mind that the success of all operations by which we seek the preservation of the child whose life is threatened by compression of the prolapsed cord is in a measure dependent upon the judicious use of chloroform, its application to full surgical anæsthesia.

GLEANINGS FROM OUR EXCHANGES.

TREATMENT OF FRACTURES OF THE FEMUR BY IMMOVABLE APPARATUS (*New York Medical Journal*, August, 1874).—The proper treatment of broken bones is still an open question, for, while upon a few points there seem to be a concurrence of opinion and a final settlement of practice, upon many points opinion and practice continue to differ. Dr. Frank H. Hamilton, in an able paper on this subject, asserts that while at the present moment plaster of Paris dressings are especially under discussion, a difference of opinion exists more particularly in reference to the treatment of broken femurs by the continuous plaster roller, known generally as Mathieson's method, and introduced in 1852. The sudden and terrible accidents, such as gangrene, ulceration, delayed union, and deformity, which had frequently followed the previous use of a similar method, prevented the general adoption of this one; but twenty years having passed away, and a new generation arisen, "primary rollers," "apparatus immobile," and plaster, convey no apprehensions of danger and are readily accepted.

In 1871 Prof. Sands reported twenty-one cases of fracture of the femur treated by Mathieson's method, in eight of which there was no shortening, the maximum shortening being one inch; Dr. Bryant published twenty-three cases, thirteen of which are not shortened;

and in 1872 Dr. St. Johns recorded fifty cases, with an average shortening of one-third of an inch, and of the whole number eighteen united without any shortening. None of these gentlemen met with any serious accident, except one perineal slough. Dr. Hamilton states that in his experience the results have not proved equally satisfactory, and suggests as probable that the examination and measurement of many of these cases had been left to other and less experienced persons than the gentlemen who reported them. In all his own cases the examinations and measurements were made by himself, and were witnessed and confirmed by the house-surgeons or by some competent medical man. By these reports he seeks to attain two purposes: 1, as has already been intimated, to enable us to form an intelligent opinion of the actual and relative value of the plaster of Paris dressing as practised at Bellevue; and, 2, to determine what amount of shortening and deformity generally results from the treatment of fractures, at the present day, in the hands of our most experienced city surgeons.

In six cases of fracture of the femur treated with plaster of Paris, in persons from eleven to eighteen years of age, there resulted in two cases a shortening of five-eighths of an inch, in one three-fourths of an inch, in two one inch, and in one one and a half inch. In three of the cases there remained considerable deformity, and in two there was ankylosis. In twenty cases of fracture of the femur treated by plaster, in persons over eighteen years of age, the following results were obtained: perfect, 1; shortened three-eighths inch, 2; shortened one-half inch, 1; shortened five-eighths inch, 1; shortened three-fourths inch, 3; shortened one inch, 3; shortened one and one-eighth inch, 1; shortened one and one-fourth inch, 2; shortened one and three-fourths inch, 1; shortened two inches, 1; case of gangrene and death, 1. Average shortening in nineteen cases, more than three-fourths inch. In five cases there was ankylosis; in one, delayed union; in one, no union; in five, deformity; and in one, paralysis, abscess, and caries.

The surgeon has to depend in this method upon the perineum for counter-extension, and upon the heel and the top of the foot for extension,—dangerous parts upon which to make pressure. If the plaster becomes loose it has to remain so, or else the limb must be re-dressed in the same manner as at first. The gangrene which occasionally occurs is due to the cutting off of the superficial venous circulation by what is in effect an Es-march's bandage. Dr. Hamilton has found that his own methods of side-splints, adhesive plaster extension, pulley and weight in the adult, and a double thigh-splint in children, have given better results than has plaster of Paris.

He gives nine cases of fracture of the femur treated recently without plaster, and, like the fractures already reported, not selected, but taken in the order of their occurrence.

In no case was there any deformity or ankylosis. In four cases of eighteen years and under, three were perfect, and one had two-eighths of an inch shortening. In five over eighteen years of age, one inch was the maximum and three-eighths of an inch the least shortening. The average shortening of all nine cases was three-eighths of an inch. Dr. Hamilton makes the following remarks on the conditions of a faithful measurement of the thigh:

"The fact that a man walks without a halt is no evidence that there is no shortening of the limb. In this regard patients are very unequal; one, having a shortening of only half or three-quarters of an inch, will limp perceptibly; while another, with a shortening of one inch or even one inch and a half, may not limp at all. This has been observed repeatedly. Nor is it

any evidence that the limb is not shortened because, while lying in bed, the heel of the broken limb can be brought down to the level of the other. By pitching the pelvis, the spine remaining erect, the heel may be made to descend, in most persons, two inches or more.

"Measurements made from the symphysis pubis, or from the round end of the anterior superior spinous process, are unreliable.

"The patient should repose upon his back, upon an even surface, with his lower extremities as nearly as possible in a line with the axis of his body, the two wings of the pelvis being in the same horizontal (transverse) line.

"A flexible, graduated tape-line is to be preferred to the steel tape-measure. The foot being steadied by an assistant, the surgeon should put his thumb-nail against the line where it joins the ring, and push his nail into the skin just below the anterior superior spinous process of the ilium, pressing firmly up and back, the back of his nail resting upon the skin. In this way he obtains a fixed point, and he can obtain an exactly corresponding point upon the opposite side. Below, the measurement may be made from either malleolus, but the outer has the most defined extremity, and is generally preferred. In most cases, for some months after the close of the treatment there is some œdema about the ankle, which renders it necessary to use great care in determining the point of the malleolus. The thumb-nail of the opposite hand may be used for this purpose, resting vertically upon the skin (flat against the lower end of the malleolus).

"There are a few sources of error which cannot be avoided. Occasionally, but very rarely, the malleoli of the two limbs are of unequal length; and in a few very rare cases, one limb may be congenitally shorter than the other."

HYDATID OF THE BRAIN—EPILEPTIC CONVULSION—DEATH (*British Medical Journal*, August 1, 1874).—A girl æt. 17, an inmate of a reformatory for two years and a half, began to excite attention by her strange conduct. She would steal things, and secrete them under her bed without any object. She refused her food, or crumbled it up and hid it in her pockets. She would lie on the floor and sleep in the daytime, but at night was restless and noisy, disturbing the other inmates of the room. She told her companions that she was shamming, that she might be sent to a hospital. On one occasion she attempted to strangle herself with a piece of ribbon tied tightly round her neck.

As no actual disease could be discovered to account for this strange erratic conduct, it was attributed to hysteria, the result of amenorrhœa, she having menstruated but once.

One morning she arose as usual at six o'clock, dressed herself, and struck one of her companions without any provocation or apparent reason. She shortly afterwards fell on the floor in an epileptic fit, and died immediately. When the body was seen shortly afterwards, the face and neck were perfectly livid, with foam issuing from the mouth. The tongue was not bitten.

The following day a post-mortem examination of the head was made. The brain was quite healthy, the vessels very slightly congested, and there was no effusion; but, on exposing the lateral ventricles, on the floor of the right one, attached to the optic thalamus, was an hydatid cyst.

LEMON-JUICE IN DIPHTHERIA.—M. Revillout recommends (*Gaz. des Hôpitaux*, June 20) in the strongest terms the employment of large quantities of pure lemon-juice as a gargle. He says that he and his father have used it during eighteen years, and always with success, it being the most certain application yet known.—*Med. Times and Gazette*, June 27, 1874.

AN EXTRAORDINARY CASE (*N. Y. Medical Record*, Aug. 1).—The *Irish Hospital Gazette* records an extraordinary case recently brought before the Dublin Pathological Faculty by Professor R. W. Smith, of Dublin University. The disease under which the woman succumbed whose skeleton he exhibited was one of rare occurrence, and difficult alike to diagnose, treat, or even name. At the time of her death the woman was forty-five years old. Fifteen years previously she had been sent to jail for some offence, which was probably committed while insane, as shortly afterwards she was transferred to a lunatic-asylum. During the first ten years of her residence there nothing remarkable about her was noticed, and she was employed in washing the floors, etc. At the end of this period she ceased to be able to work, and was confined to bed for the remaining five years of her life, gradually becoming more feeble, and dwindling away in stature until she became about one-half the height she was originally. She did not complain of any pain; her limbs became coiled up in every possible shape, and she seemed gradually to disappear from off the face of the earth. She died, possibly, from constitutional disease of the osseous system. He (Professor Smith), however, looked upon the condition of the bones not as a disease, but as a manifestation of an as yet unknown diseased condition. Professor Smith had weighed all the bones individually; the total weight of the skeleton (including the cranium) was two and one-half pounds, which equalled about the fourth part of the weight of a child at birth. The bones were extremely light, soft, fragile, and atrophied in every respect. The number of fractures was prodigious. The ribs were in a hundred fragments. The head of the humerus was bent; the fibulæ were curved; the thigh-bones and pelvis were huddled up together; and the bones of the vertebræ thinned and worn away across the front of their bodies. The lower jaw was atrophied and broken into three fragments; the base of the skull was cribriform all through; and he (Professor Smith) believed that if the woman had lived longer not a vestige of a bone in her body would have been left. As to the nature of this disease, he (Professor Smith) believed that it was identical with rickets occurring in the adult; and although that opinion might appear heretical to some, yet he was glad to find that in the last volume of Trousseau's *Lectures on Clinical Medicine*, that distinguished author, had expressed his opinion that osteomalacia and rickets were one and the same disease.

INTRAVENOUS INJECTIONS OF CHLORAL (*The Doctor*, Aug. 1, 1874).—The proposal of M. Oré to inject a solution of chloral into the veins for the purpose of producing anæsthesia has given rise to some discussion.

M. Collin objects to any intravenous injection on the following grounds:

1. That any medicinal agent employed in such a manner may act in too decided a way upon the cardiac, muscular, or nervous system.

2. That the substance so injected might form microscopic clots capable of plugging the capillaries of the lung and producing grave and even mortal lesions.

On the other hand, M. Bucquoy believes, after experimental tests—

1. That the act of injection is innocuous when the vein is not denuded.

2. That chloral used in this manner is not more dangerous than chloroform.

ACETIC ACID SPRAY IN DIPHTHERIA.—According to the *New York Medical Record*, very satisfactory results have been obtained at the Charity Hospital, in the local treatment of diphtheria by the use of acetic acid, in solutions of varying strength, in the form of spray produced by the atomizer.

THE PRODUCTION OF ANÆSTHESIA DURING SLEEP.—Professor Dolbeau, after several series of experiments, feels justified in drawing a somewhat positive conclusion on the possibility of inducing anæsthesia during sleep. "Scientifically, it is difficult, but often possible, to render persons insensible by means of chloroform, who are in a state of natural sleep. Certain precautions, the employment of a very pure article, and great practice, are conditions that favor the success of the attempt. It is probable that certain subjects are absolutely refractory, that is, it is impossible to anæsthetize them, in spite of every precaution that can be taken. Others, on the contrary, and especially young children, easily undergo anæsthesia without being aroused from their sleep by the irritation which the anæsthetic produces in the air-passages. Under the criminal aspect, it is certain that chloroform administered to sleeping persons may facilitate the perpetration of certain crimes. It is, however, probable that the conditions favorable for anæsthesia will be rarely combined on the occasion of criminal attempt. But before the tribunals the expert should declare that it is possible, if not easy, to render a sleeping person sufficiently insensible by chloroform to allow of his becoming the victim of a criminal attempt."—*Missouri Clinical Record*, August 8, 1874.

HYPODERMIC INJECTION OF ERGOT IN VARICOCELE.—In a case of varicocele which had existed for a long time, Dr. Bertarelli, of Rome, injected a solution of ergotin under the skin of the scrotum. The solution consisted of ergotin, 1 gramme, water, with a little alcohol, 2 grammes. The patient was ordered to maintain absolute repose, and to make local application of cold compresses. The next day the varicosities had disappeared. The success was complete after another injection, which was attended by but slight local reaction.

Dr. Cittaglia had cured another case of varicocele by the same treatment. By the eighteenth day nearly all the varicosities had disappeared; and there was nothing but a slight induration of the corresponding testicle to be observed.—*Alm. di Terapie*, 1874, *Lo Sperimentale*, March, 1874.

CHLORHYDRATE OF TRIMETHYLAMIN IN RHEUMATIC FEVER.—A new successful instance of the above has been communicated to the Therapeutical Society of Paris, by Dr. Martineau. When called to the patient he found that the elbow had, since the morning, become red, enlarged, and painful; skin hot; pulse 90. Ten grains of the drug were administered. The next day a great improvement was noted. The pain in the elbow had entirely disappeared, and the pulse had fallen from 90 to 65. No crisis or cardiac complication had occurred. The same treatment had been equally successful in a similar attack a year previously.

ENEMATA OF BROMIDE OF POTASSIUM IN OBSTINATE VOMITING.—Dr. Girabetti (*Medical News and Library*, August 8, 1874) has obtained the very best results from the administration of enemata of bromide of potassium, in doses of from one-half to two drachms, in cases of obstinate vomiting attending the pregnant state. The same drug, also administered in enemata, has been very successful in the hands of Dr. Laborde, of Paris, in obstinate vomiting connected with disease of the stomach, liver, and intestines.—*Lancet*.

ACTION OF BROMIDE OF CAMPHOR.—From many experiments upon cats and guinea-pigs, Bourneville concludes that, even in small doses, the bromide of camphor depresses the temperature, and that this depression increases progressively as the dose is increased, to attain its maximum in those cases where the dose administered is sufficient to produce fatal results.—*Le Progrès Médical*, June 20.

SURGICAL ANÆSTHESIA.—M. Fornes (*Medical News and Library*, August, 1874), a French naval surgeon, urges the advantage of putting a patient asleep by administering chloral hydrate previously to his inhaling chloroform for the purpose of anæsthesia.—*Le Mouvement Médical*, June 27, 1874.

MISCELLANY.

LOUISE LATEAU AND THE DISEASE OF THE MYSTICS.—Dr. Charbonnier has lately brought under the notice of the Académie de Médecine in Paris the disease under which Louise Lateau, the famous ecstatic, is now laboring. In a general review of the so-called mystics, he demonstrates that two natural conditions are indispensable to reach the mystic stage: the one, to profess a religion of which incarnation is one of the fundamental principles, so as to allow man to represent his divinity according to the form which accords with his desires and the climate which he inhabits; secondly, to submit himself to a debilitating regimen, which, while diminishing the activity of his physical functions, suppresses the superior faculties of the soul, to the advantage of the imagination—the *folie du logis*. Among the Hindoos, as among the Christians, the ecstatic undergoes a long preparation, consisting, for the corporeal part, in proceedings likely to annihilate all the functions; and for the soul, in such as suppress the functions of relation and the exercise of the will, and in the concentration of all the strength in order to fix the attention on a single object. He says that ecstasy has never been produced at once and in a healthy subject. The history of all mystics bears witness to this; and Louise Lateau has appeared, once again to confirm this law,—a law which takes the occurrences which have lately taken place at Bois d'Hama from the category of the marvellous.

Louise Lateau, who began to show signs of the ecstatic state when about eighteen years old, was accustomed from her earliest infancy to the more than frugal regimen of the Hindoos,—to the enforced fasts of poverty, to privations of all kinds, watchings, fatigue, and, in fact, everything which could impede the functions of nutrition. On several occasions she has manifested true suspensions of functional action, characterized by the absence of urinal discharges, constipation, sleeplessness, spasms of the epigastrium, and complete want of appetite,—a group of symptoms which are often found assembled in Esquirol's observations respecting maniacs. The stoppage of the functions, this living mummification of the organs and tissues, sometimes lasts a month in Louise Lateau. Dr. Charbonnier believes this condition to be the same which is often met with in insane persons, who refuse to take nourishment with the greatest obstinacy.

When Louise Lateau had arrived at a certain stage of debility, she suffered from neuralgic attacks, the inseparable companions of an impoverishment of the blood in common with sleeplessness. *Sanguis moderator nervorum, sanguis somniferus*. These nervous

phenomena have followed a sequence parallel to the aggravation of the general condition: painful neuralgias of the face, headaches, transient troubles of the intellect, slight attacks of delirium. After enforced feeding, which is prolonged more than a month, and hemorrhages, first by the mouth, then by the womb, and afterwards from the feet, hallucinations attended with delirium came on, which lasted several days. Some weeks afterwards an ecstasy came on. Such was the progress of the phenomena.

Dr. Charbonnier, in an exhaustive memoir on the mystics which he has lately presented to the Academy, makes an abstract of the chapter in it relating to the ecstatic state, showing the modifications of the organs of those afflicted by this disease,—modifications which may explain how life is sustained, notwithstanding such prolonged abstinences, and which he terms the "substitution of organs,"—a law which, according to him, is intercalated between the law of Malthus and that of Darwin.

THE "ESCAPE-BOX."—It is stated in the reports of the different prisons of Paris that five or six thieves die annually in jail from the effects of swallowing this box. It is of polished steel, about three inches long, and contains turn screws, hammers, silk thread, and every implement necessary for escape. The box is easily swallowed, but sometimes refuses to glide along the intestinal canal as expected, and often causes death. When, however, it does reappear, the thief is in possession of implements with which he can saw through the thickest bars.

"THEY DO THESE THINGS MUCH BETTER IN FRANCE."—Last May, at Châteaudun, three vendors of a quack medicine were condemned in the criminal court,—one to three years' imprisonment, two to two years, and all three to pay a fine of five hundred francs each. They were convicted in ten instances, in which the total of their receipts had not reached the sum of seven hundred francs. They were tried for *swindling*.

"This is noble!" said I, clapping my hands together. —*Boston Medical and Surgical Journal*.

RABIES IN SHEEP.—Some three weeks ago a mad dog bit two sheep at Wigginton, near Tamworth. On Saturday week one of the sheep showed symptoms of rabies, which gradually increased in intensity until Tuesday, when the animal's suffering became so pitiful that it was killed. No similar symptoms have as yet appeared in the other sheep.—*Med. Press and Circular*.

NOTES AND QUERIES.

NOT A DISCOVERER.

DEARLY BELOVED EDITOR,—I was not the first to discover the virtues of chloral in puerperal convulsions; I was *not* the first to use it in the United States, not the first in Philadelphia, not even the first in C—St. Nor did I ever mention chloral in (ahem!) my address on obstetrics, etc., etc. In fact, O friend of my heart (I write this with tears in my eyes), I *never* used chloral in puerperal convulsions, because (*turpe dictu*) I never had a case of that disease.

Pray, Mr. Editor, are you acquainted with anybody else who *did not*

discover the redoubtable powers of chloral? If so, let me know by telegraph. By doing this you will convey some little consolation to one who is
NOT A DISCOVERER.

THE MEDICAL STAFF OF THE UNITED STATES ARMY.

TO THE EDITOR OF THE PHILADELPHIA MEDICAL TIMES:

SIR,—As one of the medical staff U.S.A., I heartily endorse the views of "A Medical Officer," as expressed in your valuable journal of July 4, 1874. My experience during many years of service I believe to be similar to his.

Assignments of medical officers according to rank are very rare for those below the rank of major, and for the latter also they are frequently not the fact. A rule of assignments based upon a recognition of the claims of seniority would remove a source of dissatisfaction that has long been felt, and not in the least ameliorated by seeing citizen-physicians, in many instances, in better, if not the best, positions.

I believe that claims specified by your correspondent would be respected more in our corps if it officially and socially recognized the rank of its commissioned officers; but since we officially know one another only by grade, and socially only by a civil title, it is not unnatural that army usage in the assignment of officers should not be applicable to them, and that, too, by members of our corps. But a year ago a medical officer gave expression to his views that "we are outsiders altogether." Where I am now on duty I am officially designated by my army rank. I have the same official recognition from all departments of the army except *my own*. Here is certainly room for reflection, since more rank is sought—and there are none others more entitled to it—at the hands of Congress, while we fail to honor that already conferred by a total disregard of it, giving force to the contemptuous remark that we "seek rank for its emoluments," as we "fail of the *esprit de corps* of officers of the army" by our own "failure of perception of the necessity of a proper respect for our army titles."

It is a great mistake that the line and the other staff corps are offended at the medical officers' use of their military rank in place of corps grade. Granted exceptions to prove the rule, and granted also that they are sufficiently numerous to be troublesome, yet since there is no recognition by the medical officers, as a corps, of their rank, the trouble is greater, as it is cited as a *cause* of opposition to those who presume to respect it. The offspring of ignorance and prejudice is not an obstacle while intelligence, respectability, and potent influence are a willing support.

RANK.

CAMP GASTON, CALIFORNIA, }
August 10, 1874.

TO THE EDITOR OF THE PHILADELPHIA MEDICAL TIMES:

I have read the many articles on "hydrophobia" lately published, and have been surprised at the statements made in regard to it by some medical gentlemen.

The idea that a dog can cause this disease when "excited" or angry, is certainly very remarkable, to say the least, and *facts* prove the contrary.

I have resided in this State for twenty-five years, and have never seen or heard of a "mad dog." I have seen numbers of persons of all ages bitten by dogs, and many dogs bitten by their kind.

The people of this State are made of material similar to that of which the people of the Atlantic States are made, and it is difficult to tell why you should have hydrophobia in Philadelphia and not in California, *if* dogs *which have no disease can produce it*.

If a dog can cause this in man when he is simply *excited*, why does he not cause it in other dogs likewise? Here there are hundreds of dogs belonging to the Indians, and, like the dogs of the East, they bite people and also each other.

The "imagination" theory will not do here, either. If this had any foundation, men would have hydrophobia in California, because they would sometimes *imagine* that they had it, and dogs and cattle would *never* have the disease, *because of the want of imagination*.

The fact that this disease does not exist here is well known, and the gentlemen who are making so much ado about "mad dogs" can ponder over it and account for it.

Respectfully,

T. T. CABAMIS, M.D., A.A.S., U.S.A.

OFFICIAL LIST

OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U.S. ARMY, FROM AUGUST 18 TO AUGUST 24, 1874, INCLUSIVE.

STEINMETZ, WILLIAM R., ASSISTANT-SURGEON.—Assigned to temporary duty at Fort McHenry, Md. S. O. 183, A.G.O., August 21, 1874.

SATURDAY, SEPTEMBER 5, 1874.

ORIGINAL COMMUNICATIONS.

AN INVESTIGATION INTO THE ACTION OF VERATRUM VIRIDE UPON THE CIRCULATION.

BY H. C. WOOD, JR., M.D.,

ASSISTED BY JOS. BERENS, M.D.

PART I.—VERATROIDIA.

(Concluded from page 756.)

Section C.—Action on the Vaso-Motor System.

FROM the evidence which has already been brought forward, it is very plain that veratroidia exerts a powerful influence upon the heart and its nerve-supply. The question as to its influence upon the vaso-motor nervous system is a separate one, but its answer is rendered more difficult by the cardiac action of the drug. There are evidently three or four sets of experiments, by the comparison of whose results light may be thrown upon the vaso-motor action of the alkaloid. First, experiments in which the drug is given to the uninjured animal, artificial respiration being maintained to avoid the influence of the altered breathing; second, experiments in which the heart is separated from the inhibitory centres; third, those in which vaso-motor paralysis is induced by section of the spine; fourth, those in which both the pneumogastrics and spine are cut.

To the first of these classes belong Experiments V., VI., and VII. A reference to them will show that the arterial pressure falls very decidedly under the influence of the drug. The mere reduction in the number of the pulse will in a measure account for this fall, but on examining closely the record of Experiment VII. it will be noticed that although the pulse was at first greatly reduced in number, yet afterwards the rate of the cardiac pulsations rose nearly to the pristine point, although the pressure was a good deal less than half what it was originally. The conclusion is logically inevitable that in large amounts veratroidia either weakens the cardiac muscles, or produces vaso-motor paralysis, or does both. In regard to its action in small doses, these experiments bear no evidence.

In order to decide the influence of the drug upon the arterial pressure after division of the pneumogastrics, the following experiments were instituted:

Experiment XXVI.—A stout terrier. Artificial respiration; woorari in just sufficient quantity to quier.

TIME.	DOSE.	PRESSURE.	REMARKS.
0 m.		85-95	Cut the pneumogastrics.
15 "		85-95	
16 "		120-130	
30 "	gr. 1-40	65-75	Injected into the peritoneal cavity.
34 "		65-75	
39 "	gr. 1-40	60-70	Injected into the peritoneal cavity.
53 "	gr. 1-40	45-55	Injected into the femoral vein.
53½ "		30	
54 "		50-60	
60 "		35-40	
65 "		30-35	

Experiment XXVII.—A stout cur. Pneumogastrics cut twenty-six minutes before the first note.

TIME.	DOSE.	PRESSURE.	REMARKS.
0 m.		140-145	Injected into femoral vein. Injected in vein. Owing to an accident, doubtful how much of these two injections entered the circulation.
3 "		145-150	
5 "		140-145	
39 "		137-140	
50 "	gr. 1-40		
52 "	gr. 1-20		
56 "		100-105	Into femoral vein. Artificial respiration imperfect. Artificial respiration very active.
59 "		110-112	
64 "	gr. 1-20	110-115	
78 "		120-140	
79½ "		75-85	
80½ "		90-95	Artificial respiration imperfect. Artificial respiration ceased. Artificial respiration renewed.
81½ "		50-60	
82 "		90-95	
82½ "			
83 "		170-175	
83½ "		100-103	
84 "		80-85	

These two experiments certainly show that, in full dose, veratroidia is capable of lowering the arterial pressure after section of the pneumogastrics, and also that small doses have but very slight effect under these circumstances.

Experiment XXVII. shows that this depression of the circulation is not due to actual paralysis. For at the eighty-second minute, when the arterial pressure was less than two-thirds its original amount, the carbonic acid which accumulated in the half-minute during which artificial respiration was interrupted was able nearly to double the pressure, driving the mercury far above its original point. This fact seems to indicate that the fall of pressure was not due to a vaso-motor paralysis, but to a sedative action on the cardiac muscle,—a sedative action which was soon overcome by the intense stimulation of the carbonic acid. Be this as it may, it is evident that if the fall of pressure be due solely to vaso-motor paralysis, it ought not to occur after division of the cord. To test this, the following experiments were performed:

Experiment XXVIII.—Dog.

TIME.	DOSE.	PULSE.	PRESSURE.	REMARKS.
0 m.		116	90-105	Spine cut in upper dorsal region. Artificial respiration applied. This is twenty-two minutes after cutting the spine.
6 "		120	75-80	Under more active artificial respiration.
8 "			95-100	Less active artificial respiration.
9 "			80-85	Pneumogastrics cut.
12 "		120	65-70	A current, at first mild and then intense, applied to freshly-exposed crural nerve, for a minute and a half. No effect on the arterial pressure.
14 "			75-80	
20 "		112	65-75	Into femoral vein.
26 "	gr. 1-20	118	60-65	
27 "			45-55	
28 "	gr. 1-20	120	55-65	Pressure sometimes rising to seventy. It is not certain how much of these last two injections reached the circulation.
31 "		120	45-65	Under very active artificial respiration.
32 "		100	40-45	
33 "		100	45-50	
35 "			45-50	

TIME.	DOSE.	PULSE.	PRESSURE.	REMARKS.
38 m.		108	35-40	
43 "		116		The tube has been put into carotid.
44 "		120	25-30	
46 "			210	Under galvanic current applied to the spine. There was a general intense spasm of all the muscles, but the pressure did not fall at once, when the current was broken, and the muscles became relaxed.
47½ "		200	180	A minute has elapsed since current was taken off.
47½ "			110-115	
49 "			170	Caused by the passage of a current through the body of the dog, producing violent muscular spasms. The pressure fell instantly when current was broken. This was repeated several times, with same result.

Experiment XXIX.—A large terrier cur. Cord cut in extreme upper dorsal region.

TIME.	DOSE.	PULSE.	PRESSURE.	REMARKS.
0 m.				Par vagum cut.
12 "		176	85-90	
13 "	gr. 1-10			Injected into femoral vein. Artificial respiration.
14 "			65-75	
16 "		170	60-70	
22 "	gr. 1-10		50-60	Into femoral vein.
23 "			55-65	
24 "			55-70	
31 "		176	45-48	
40 "		174	40-43	
45 "	gr. 1-10		30-35	Into femoral vein.
46 "		176	30-35	
47½ "		176	35-40	
56 "		176	40-41	
58 "			30-35	
65 "			60-65	
65½ "	gr. 1-6			Into jugular. Dropped a few seconds after injection to fifty at one bound, and rose again to seventy.
69 "	gr. 1-6		90-105	Into jugular. Fell as before to sixty.
70 "		200	60-65	
72 "			70-75	
73 "		184	85-90	Another injection of one-fourth grain into jugular was followed by a fall of the arterial pressure to nothing and cessation of pulsation. The heart refused to react to galvanism.

Experiment XXX.—A large cur dog. Veratroidia impure. Spine cut in the lower cervical or extreme upper dorsal region.

TIME.	DOSE.	PULSE.	PRESSURE.	REMARKS.
0 m.		136	85-93	
14 "	gr. 1-30		65-70	Injected into femoral vein.
28 "				Par vagum cut.
31 "	gr. 1-10	168	50-60	Into femoral vein.
34 "		162	50-60	
36 "			45-50	Lost some blood.
47 "	gr. 1-10	152	30-35	Into femoral vein.
48 "		128	30-35	
60 "		160	30-35	
61 "	gr. 1		30-35	
61½ "			50-55	
63 "		172	70-75, going to 80.	
64 "			75-85	
65 "		188	65-75	
66 "			65-70	
67 "	gr. ½			Into femoral.
68 "			55-65	
69 "	gr. ½	186	55-65	
69½ "			30-35	
70 "	gr. ½			
70½ "			50-55	Mercury then dropped at once to zero. The heart immediately afterwards at the autopsy was found incapable of responding to stimuli.

In studying these experiments, it will be perceived that in the first the arterial pressure under the influence of the poison fell very steadily and very decidedly up to the time when galvanism was applied to the spine, and the experiment, so far as it affects the point now under discussion, was ended. The second and third of these experiments (XXIX., XXX.) are in accord in that the pressure for a long time fell with sufficient regularity, but after the exhibition of enormous doses of the drug rose again, the rise being in each instance coincident with an increase in the pulse-rate. The explanation of this phenomenon is difficult. Any defect in the artificial respiration will, under the circumstances present in the experiments, give rise to an increased arterial pressure, and the increase which occurred may possibly have had such origin. The probabilities would seem to be, however, that the secondary rise of pressure was really caused by the drug. As the exact position at which the spine was divided was, unfortunately, not noted, it is barely possible that the point of section was below the position at which the accelerators of the heart are given off, and that the increased pulse-rate was due to a stimulation of these accelerators, the increased pressure being the result of the increased frequency of the heart-beats. Be these things as they may, it is certainly a fair deduction from the record—first, that the fall of pressure produced by veratroidia is not caused solely by its vaso-motor action; and second, that a study of the arterial pressure indicates that when used in moderate doses the alkaloid has very little influence upon the vaso-motor nervous system. In order, however, to test this matter more accurately, other experiments have been performed. It is well known that when a sensitive nerve or even a portion of the skin is irritated in the rabbit, a very great rise of arterial pressure is produced. In the dog the result is less constant, and in some cases the pressure even falls. The cause of this is the very great power and sensitiveness of the cardiac inhibitory nerves in the dog, for as the result of this sensitiveness and power the heart is depressed so much by the pain as more or less to overbalance the effect of the vaso-motor spasm. This is shown by the fact that the rise of pressure is very marked when an afferent nerve is irritated *after* section of the pneumogastriacs. The fact (see Exp. XXVIII.) that after section of the cord stimulation of a nerve is powerless to cause rise of pressure, shows that the latter is due to a vaso-motor spasm, and that the vaso-motor centres are placed above the cord.

In order to test the influence of veratroidia upon the vaso-motor centres, the following experiments in conformity with the above-mentioned facts were performed:

Experiment XXXI.—A stout bull-terrier pup.

TIME.	DOSE.	PRESSURE.	REMARKS.
0 m.	gr. 1-40		Injected into femoral vein.
25 "			Cut the pneumogastriacs.
29 "			

TIME.	DOSE.	PRESSURE.	REMARKS.
30 m.		35-40	
30¼ "		50-55	Rise due to momentary application of a mild current to crural nerve.
31 "		30-35	
32 " gr. 1-40		30-35	Injected into femoral vein.
40 "		35-40	
47 "			Strong current applied to a freshly-dissected crural nerve.
48 "		110	Current broken.
49 "		35-40	
71 " gr. 1-40			
80 "		25-29	
81½ "		35-38	The slight rise only effect of a very strong current applied to a large, freshly-dissected nerve.
84 "			Artificial respiration stopped.
84¾ "		135-195	

Experiment XXXII.—A stout terrier. Artificial respiration, and woorari, in quantity sufficient to keep dog quiet and nearly to suspend respiration for a time, injected into the veins.

TIME.	DOSE.	PRESSURE.	REMARKS.
0 m.			Pneumogastrics cut.
5 "		90-100	Strong current applied to crural nerve.
5½ "		120-130	
15 " gr. 1-40		65-75	Injected into peritoneal cavity.
24 " gr. 1-40		60-70	Injected into peritoneal cavity.
38 " gr. 1-40		45-55	Injected into femoral vein.
65 "		30-35	Strong current applied to crural nerve.
66 "		30-40	

These two experiments show that whilst the arterial pressure does rise when an afferent nerve is stimulated in a dog with divided pneumogastrics, after a dose sufficient gravely to imperil life, yet when artificial respiration is performed and very large doses of the drug exhibited, the arterial pressure does not respond to the irritation of a sensitive nerve: *i.e.*, small doses of veratroidia do not affect very decidedly the vaso-motor system, but large amounts do exert a directly depressing influence upon these centres.

In concluding this investigation upon the action of veratroidia on the circulation, the results arrived at may be summed up in a few words.

The action of this alkaloid upon the circulation is altogether subordinate to its influence upon the respiration.

In minute doses it stimulates the cardiac inhibitory nerves or nerve-centres, but when given in sufficiently large doses it finally paralyzes the peripheral inhibitory cardiac nerves.

It exerts some action upon the heart-muscle or the contained ganglia; this action is probably a sedative one, but it is very feeble, and is only distinctly perceptible when the drug is precipitated at once upon the heart, or when the dose given is much above that required to arrest respiration. To kill the heart-muscle very large amounts are required.

Upon the vaso-motor system veratroidia acts as a depressant, but its influence is feeble, much less intense than its action upon the pneumogastrics. When artificial respiration is maintained, it can be given in such doses as to paralyze the vaso-motor centres.

(To be continued.)

THE METHODS OF PERFORMING ELECTROLYSIS IN ANEURISMS, NÆVI, AND OTHER BENIGN TUMORS.

BY GEORGE M. BEARD, M.D.

THE success of the electrolytic procedure in aneurism, varicose veins, nævi, cystic and other benign tumors, depends on the method used. One may fail by one process and succeed by another, just as in any other surgical operation. The tendency has been to be satisfied with the mere employment of galvano-puncture, without regard to the method, and to accept the results, whether favorable or unfavorable, as serving to settle the question of the value or uselessness of electricity in surgery.

In electrolysis everything depends on the method; and with the same method, skill, care, and thoroughness may succeed when awkwardness, carelessness, and inattention fail utterly. The failure of electrolysis in any form of tumor, benign or malignant, is not to be counted a reproach until we know the actual method used and the character of the operator.

The method of electrolysis of the base or working up the base, that I have employed in the treatment of malignant tumors, I have elsewhere* described in detail. I have here to speak only of ordinary electrolysis, where the needles, insulated or non-insulated, are plunged directly into the tumor.

The errors that have been and are continually made in electrolytic operations begin and end in ignorance or forgetfulness of the laws and facts of electro-physics and electro-physiology, and especially of the former. No one can be a scientific and successful electro-surgeon without also being more or less of an electro-physicist.

ANEURISMS.

In the treatment of aneurism, the great end sought is coagulation. A knowledge of the differential action of the poles in producing coagulation is essential to an intelligent use of electricity in treating aneurism. Coagulation takes place at both poles of the galvanic current; that at the positive pole being small, black, and hard, and that at the negative being larger, softer, and of a yellowish color.

Aneurisms may be treated with greater or less success, according to their size and position, the condition of their walls, and general health of the patient, by either of the poles, or by both combined.

The best method for the majority of cases, certainly for aneurisms of any considerable size, is to use both poles, and a large number of needles that are insulated so that the current will not act on the walls of the aneurism. In the treatment of aneurism, especially, careful insulation is needed. The advantage of using both poles is twofold.

First, a double clot is formed, one at the positive and the other at the negative pole. Although the

* Archives of Electrology and Neurology, May, 1874.

negative clot is soft and yielding, still, in combination with the positive clot, it is of decided service in closing the aneurism; and, so far as I can ascertain, there is no evidence that embolism is ever caused thereby.

Secondly, the resistance is greatly reduced by placing needles connected with both poles in the sac, so that the electrolytic action is very much more effective than when one pole is placed on the surface of the body. The blood is the portion of the body that best conducts electricity; and when both poles are inside of the sac and near to each other, as of course they must be, a mild current will cause vigorous electrolysis. On the other hand, if one pole be applied by a wet sponge to some indifferent point on the surface, a strong current is needed to produce a clot, and a long operation; and, unless the sponge on the surface is occasionally moved, it would cause great pain; and if the patient is under an anæsthetic, a blister may be caused. As the negative pole is more painful than the positive when the positive alone is in the aneurism, the negative on the surface may be very uncomfortable even with a feeble current.

In the electrolytic treatment of aneurism, as in so many other electrical applications, it is an advantage to have a rheostat, so as gradually to let the current on or off without shock.

STATISTICS OF ANEURISM TREATED BY ELECTRICITY.

The published statistics of aneurism treated by electricity are of little or no value, and for two reasons. 1. They represent experiments made, in a large percentage of the cases, by those who are but little familiar with electro-physics or electro-physiology. Quite frequently the poles have been confounded, so that it is impossible to tell whether the positive or negative is used, and from many of the accounts it is impossible to tell even approximately the strength of current used.

2. The statistics are derived in part, at least, from cases that are reported too early. The temporary relief that results from the coagulum formed in the aneurism by the chemical action of the current has been interpreted as indicating a perfect recovery.

Some of the cases hastily reported as cured probably died soon after, if not before the account of their recovery was fully in print.

For these reasons I omit all the statistics that have appeared on this subject, preferring the general average opinion, so far as it can be obtained, of those surgeons and electro-therapeutists who are best qualified to speak on this subject.

My general conclusion, derived from many experiments on animals, from actual experience, and from a comparison of the various observations that have been made on the subject, is, that for those varieties of aneurism—such as the thoracic, abdominal, etc.—that cannot well be treated by the old methods, and in some cases for those that are accessible to other treatment, galvano-puncture, rightly performed, may be of great service in relieving the accompanying symptoms, and in prolonging life, and in some cases may effect a perfect and permanent cure.

VARICOSE VEINS.

Varicose veins were treated by galvano-puncture, after the manner of aneurisms, many years ago. For the treatment of varicose veins the positive pole would probably be better than the negative, or than both together, and for the reasons above given. The space within the enlarged vein is comparatively small, and the small clot made by the positive pole ought to be sufficient to obstruct the *flow* of blood. The positive clot would have the advantage of firmness, and embolism would be less likely to follow than after the use of the negative pole.

NÆVI—ERECTILE TUMORS—ANGEIOMATA—MOTHERS' MARKS.

This variety of tumors may be treated by the ordinary method of electrolysis, with a good probability of success, provided the conditions of success are skilfully observed.

It is first of all necessary to understand that to cure all forms of erectile tumors electrolytically without leaving any scar or trace is simply impossible. In many cases, and notably in those of larger size, and which are partly cutaneous and partly sub-cutaneous, sooner or later destruction of tissue is requisite to bring about a cure; and destruction of tissue after electrolysis, like destruction of tissue after the use of other agents, is followed by cicatrization.

When the nævus is small and superficial, then a mild electrolytic operation may be followed by a shrinking of the tumor and a rapid and permanent absorption of the débris without any scar; but such cases can hardly be said to constitute the majority. The scars following the electrolytic treatment of nævi may, however, rapidly disappear; at least, the little patient may in time entirely outgrow them.

It is necessary to be understood, in the second place, that the electrolytic operations for nævi, as for other kinds of morbid growths, are usually sufficiently painful to require some form of local or general anæsthesia. It is almost absolutely safe to give ether to young children; and the operation, even though it be but very short and but little painful, can be conducted far more successfully when the child is anæsthetized than when it is not. With adults, and sometimes with children, local anæsthesia by ether-spray is sufficient; but it is generally inferior to general anæsthesia. The struggles of the child to get free, its terror at the sight of the instruments, can all be saved by a carefully-administered anæsthetic.

The details of the operation differ with the size and character of the tumor. Success has followed the use of both poles in the tumor, or only one, while the connection is made by a sponge electrode on some indifferent point. If the tumor be small, and but one pole is used, it is better that it should be the positive, since the clot found at the positive pole, though small, is hard and firm. If the tumor be large, needles connected with both poles may be used. Whether one or more needles are to be used depends on the size of the tumor; but gen-

erally one needle connected with each pole is sufficient. If many needles are used, it is difficult to manage them; and some may fall out, and thus disturb the operation. It is better, as a rule, to take out the needle at different stages, and insert it in various parts, until the entire growth is acted upon. I have sometimes found it of advantage to reverse the current during the operation, so that all portions of the tumor may be acted on by both poles. Insulation of the needles is only required in the case of entirely subcutaneous tumors—where, as in the case of aneurism, it is desired to produce a coagulum (which may be slowly absorbed) without injury to the skin.

The length of the operation may range between five and twenty-five minutes, according to the strength of current used, the size of the needles, and the size of the tumor.

The great point in all electrolytic operations for *nævi* is to do just enough without doing too much. If the operation be not reasonably thorough, absorption will not take place, or the tumor may recur. If the operation be too extensive or prolonged, the destruction of tissue may be greater than is needed, and the subsequent cicatrization may amount to at least a temporary deformity. For very large and semi-subcutaneous *nævi*, that exhibit a tendency to spread in all directions, it is necessary to place the needles at or near the base of the tumor, and in the surrounding tissue, among the enlarging and tortuous vessels, in a manner somewhat resembling the method of electrolyzing the base of malignant tumors. If such tumors are treated timidly, no good result will come, and the operation may be several times repeated without satisfaction.

The advantages of the electrolytic procedure in *nævi* are these: 1. In small and superficial tumors the cure may be effected with little or no scar. On the face and other exposed parts of the body, this advantage is very great. 2. In the large *nævi*, and those which are partially or entirely subcutaneous, the liability of recurrence would be less, and probably the extent of the cicatrization would be less, than after the ordinary method of treating these growths.

GOITRES.

Goitres are to be treated by ordinary electrolysis with sharp, bayonet-shaped needles, which may be either insulated or non-insulated. Needles that are smoothly insulated can be inserted through the skin of the neck without very much more difficulty than non-insulated needles. But if the insulation be roughly put on, the difficulty in insertion may be very great. An advantage of non-insulated needles is that by the action which takes place in the skin around it the needle becomes loosened at the negative pole, and so can be pushed in still farther without difficulty. For goitres of all kinds, the negative pole is much preferable to the positive pole, and for the same reasons as in cystic and fibroid tumors. It is better not to connect any needle with the positive pole, but to complete the circuit by a sponge electrode applied over the surface of the tumor. There is no danger in inserting a needle

even into a small goitre to a considerable depth, say one or two inches. By great carelessness it would, I suppose, be possible to wound the carotid artery. I do not usually employ an anæsthetic in the operations on the neck. I find that the ether-spray, or the local application of a mixture of carbolic acid and ether, prevents, to a considerable extent, the pain of the introduction, which the patient much dreads, and which is really more severe than the pain of the electrolysis after the needles are in position.

In a few cases I have observed that the needles, when inserted in a goitre, cause, by reflex action, pain in the forehead; in other cases, nausea and a tendency to faintness are observed. The majority of patients do not fear an operation of more than from five to fifteen minutes, which may be repeated two or three times a week.

This purely electrolytic treatment may be varied by external galvanization and faradization, with strong currents.

There is no question that external galvanization and faradization with strong currents, both steady and interrupted, will cause a considerable reduction in the size of goitres; and even when these methods do not cause any perceptible diminution, they at least relieve the sense of pressure, the heaviness, and the sense of suffocation or of choking that goitres often cause. External electrization alone is not so satisfactory as electrolysis with needles.

The prognosis of goitre under electrical processes varies with the nature of the tumor. Those which are small and soft may disappear entirely and permanently. Those that are large, provided they are not too hard, may also entirely disappear. The cystic varieties also give a good prognosis. Those that are both very large and very hard may diminish a certain percentage, but they do not entirely disappear. The best method of estimating the results of treatment is to take measurements of the neck. Almost all goitres will go down more or less, and usually at the outset of the treatment. Afterwards they recede more and more slowly; and, even in those cases where the cure is complete, the last quarter will require more treatment than the first three quarters. This is true of all solid growths that are treated by electricity.

CYSTIC TUMORS.

Benign cystic tumors may be successfully treated by the ordinary method of electrolysis. I have treated a number of cases, small and large, and with excellent results. The object of the electrolytic procedure in benign cystics is, of course, very different from the object of the same procedure in *nævi*. The therapeutical action of the current on cystics is somewhat complex. 1. The fluid is decomposed. The gaseous products of this decomposition sometimes escape through the holes made by the needles. 2. The walls of the cyst are stimulated, so that the fluid is absorbed, and thus the tumor is caused to shrink. This is, in fact, the *rationale* of electrolysis in hydrocele. 3. Decomposition of the walls of the cysts. This takes place, of course, only when uninsulated needles are used. When

the needles are insulated near to the end, the walls of the cyst are not acted on. 4. Evacuation of the fluid contents of the cyst without decomposition. This result may follow puncture of any kind, even when no electricity is used. It is more likely to follow electrolysis with the negative needle, for the reason that the needle, when not insulated, acts on the walls of the cyst and enlarges the opening made by the needle.

In operating on cystic tumors by electrolysis, the best procedure is to insert needles connected with both poles. The positive needle may be kept fixed, while the negative is worked in various directions, so as to act upon all the inner surface of the cyst, and also to enlarge somewhat the hole made by the needle in the walls of the tumor, and thus allow free exit of the fluid or gases.

Large, long, cutting needles are usually preferable when the tumor is large; but for small tumors almost any kind of needle will answer.

Hydrocele is treated electrically on the same principle as cystic tumors. The mere evacuation of the fluid, or the electrolysis of it, accomplishes but little unless the secreting surface is acted on by the current.

FIBROIDS.

Fibroids are usually hard, and therefore slow to decompose under electricity. This is true of all fibroids, wherever situated,—in the neck or any portion of the periphery, or in the uterus. Inasmuch as they are not usually malignant, the method of electrolyzing the base is not needed. They are to be treated by ordinary electrolysis, needles connected with both poles being inserted in the tumor. The needles may be insulated or non-insulated, according to the situation of the tumor.

The behavior of fibroids after electrolysis is not generally satisfactory: the amount of decomposition, on account of the density and comparative dryness of the tissue, is but slight, and the subsequent shrinkage and atrophy are not so marked as in goitre or cystic growths.

If a current of sufficient strength be used, the patient being anæsthetized, suppuration may be excited, and, as a result of the destruction and loss of tissue, the tumor may become somewhat smaller.

Fibroids of the uterus are of sufficient importance to be specially considered. They may be treated electrolytically, either through the vagina or through the abdominal walls, according to the position.

The danger of creating peritonitis by thrusting needles through the abdominal walls is but slight, and if the needles are well insulated by rubber there is really no danger. The insulated part should, of course, go beyond the peritoneum.

Dr. Kimball, of Lowell, reports excellent results from treating fibroids in this way. My own observations in this direction have not been of the most encouraging nature. I have never seen a large and hard fibroid tumor disappear under electrolysis. Relief of pain, of neuralgia, of anæsthesia, and of many of the other attendant symptoms, I have many times obtained, but never a complete or approximate dispersion of the tumor.

LIPOMATA (FATTY TUMORS).

Ordinary surgical treatment with the knife is so successful for fatty tumors that electrolysis would hardly be indicated, even if it could accomplish as much and as easily as the knife. Fatty tumors are, of course, benign, and when operated on do not recur. Fat decomposes slowly and with difficulty, and is not subsequently absorbed, at least to any marked degree. I have experimented on a number of cases of fatty tumors, small and large; but, although some slight reduction in size can be gained, the results have never been satisfactory.

WHISKY AS AN ANTISEPTIC DRESSING.

BY J. L. SUESSEROTT, M.D.

IN fulfilment of a promise made to Prof. Wm. Pancoast at the meeting of the Pennsylvania Medical Society at Carlisle in June of last year, I desire to place on record my testimony as to the value of the above-named agent. And, lest I might be misunderstood as claiming priority in its use, I will state that in the *Glasgow Medical Journal* for February, 1870, Dr. D. Blair recommended the use of whisky as a surgical application, and gave his method of using it, as follows:

"To remove the foreign substances or clotted blood, the wound is first washed thoroughly with strong whisky; it is then closed with stitches if necessary, again bathed with whisky, and covered with a rag and bandage both saturated with the same fluid; and, finally, all is enveloped in gutta-percha tissue or oiled silk, and directions given to the attendants to wet the bandage from time to time with the spirits. As a rule, the first dressing is not disturbed for three or four days, and afterwards it is changed every day, or every second day, according to circumstances. The principal thing to be attended to is to have the bandage kept wet with the whisky,—but not *too wet*, or it will impede the progress of the cure. I have never seen *much* sloughing, and I have not once seen erysipelas occur in wounds treated in this way; probably because septic germs, if they exist at all, are not numerous in our hyperborean regions."

After giving the history of two or three cases, the doctor adds, "I have also used whisky as an application to bed-sores. When fever occurs epidemically in country districts and villages, especially in the Highlands, it generally causes a panic among the inhabitants. The dread of contagion is so great that occasionally no one will venture to undertake the duties of nurse. Under these circumstances bed-sores are of frequent occurrence. I have seen more than one case in which the os sacrum and coccyx were exposed from sloughing in typhus, and yet the patients recovered. The bed-sores were treated with linseed and oat-meal poultices, mixed with whisky, until the slough separated; then whisky lotions were applied.

"In cases of chronic and scrofulous abscess, I have used whisky as an injection, and find that it checks the discharges and hastens the cure. In a case of

scrofulous abscess of the hip-joint, I attribute the recovery of my patient to its having been used in this way. The pain and hectic before and for some time after the abscess was opened caused so much prostration that I had slight hopes of my patient's recovery. I persisted, however, in using the injection two or three times daily, bathed the whole limb often with spirits, and kept it wrapped in cotton-wadding and a bandage. The stomach for a time would not tolerate solid food of any kind, and even beef-tea provoked nausea. Notwithstanding, in an incredibly short time my patient rallied, and I had the pleasure of seeing him walk well, although the joint continued somewhat stiff.

"In a singular case of abscess situated beneath the muscles in front of the abdomen, which opened at the umbilicus, I was highly pleased with the result gained by these injections. The discharge obstinately continued, although I perseveringly applied for a considerable time poultices and lotions of different kinds. At last I resolved to inject with strong spirits, but, from the peculiar situation of the abscess, and fearing inflammation might supervene, I used it very cautiously at first; but, no unfavorable symptoms having followed the first application, by degrees it was used more freely—two or three syringefuls at a time repeated twice or thrice daily. In a few days there was a marked improvement, and soon the discharge ceased completely, and the patient is now well."

I trust I may be pardoned for quoting so largely from Dr. Blair, but in no words of mine could I more fully convey the results of my own experience or give stronger testimony as to the value of what to me would now be an almost indispensable agent.

In my opinion, the antiseptic properties of whisky are not all the virtues that it possesses. The gentle stimulation to the granulations on the one hand, and its cooling action by evaporation on the other, undoubtedly aid in a material degree in bringing about repair. Dr. Blair neglected to state that it is only the first application that is objected to or is in any appreciable degree felt by the patient. If the compress or bandage is kept moist with the spirits, a very grateful feeling is produced; and in cases where even considerable laceration has occurred, healing by *first intention* may be confidently expected. I could recount numerous cases that would bear me out in this assertion, but will let a few suffice.

Charles E., aged 60 years, a carpenter, about two years ago had his right fore-arm terribly lacerated by coming in contact with the revolving head of a planing-machine. The integuments and muscles of the back part of the fore-arm were torn in shreds; the limb was placed on a splint, the torn tissues were restored as nearly as possible to their places, kept *in situ* by isinglass-plaster, and supported by compresses saturated with strong whisky. In two weeks from the time of the accident, no suppuration having taken place, the splint was removed and my patient was at work. About a year after this occurrence the same patient had the back of his left hand thrown into the same machine. The result was that the articular ends of the second and third phalanges of three of his fingers were entirely knocked out, leaving the fingers hanging by the flexor tendons. Deeming it impossible to save more than a

stump of the hand, I was about to remove the dangling digits, against which procedure the patient strongly protested. Sympathizing with the now twice unfortunate man, and desiring to let the realization of the full extent of his maimed condition break upon him gradually, I procured three small splints, upon which I carefully laid the, as I was fully persuaded, lifeless fingers, secured them with isinglass-plaster, and placed the whole hand upon a heavy straw-board splint, with the full assurance, in my own mind, that even with the deodorizing effect of whisky, by the next day my very hopeful patient would be satisfied of the propriety of their removal. The part, or, I might more truly say, the whole hand, was kept saturated with my favorite fluid for external use, and, much to my surprise and gratification, on the following day I found the circulation re-established. The fingers were kept on small splints to prevent too much shortening. Granulations repaired the lost soft tissues almost entirely, and, the metacarpophalangeal articulation not having been injured, I had the extreme pleasure, at the end of four weeks, to see my patient, who, by the way, is a man of strong nerve, hard at work, with a very useful hand.

About the time of the first accident to this patient, Charlie W., a lad of about 12 years of age, ran into a mowing-machine. His left foot was cut off just at the top of his shoe, and the right one, it having been elevated in the act of running, was taken off through the tarsal bones. Assisted by Dr. E. N. Sensery, of this place, I shortened the bones of the left leg so as to procure sufficient covering, but we both concluded that by the removal of the cuboid bone of the right one we might hope to save the heel, and make the limb more useful; leaving it as in Chopart's or Symes's amputation. Even after the use of strong ligatures and contracting bands, we were not able to bring the tissues together, but were compelled to leave a surface of two and a half or three inches entirely exposed. Into this we packed patent lint, well saturated with whisky, satisfied that, with some suppuration, we might hope for a full repair of the parts. Suffice it to say that in an incredibly short space of time the parts were healed, without any want of covering to the stumps, and with the loss of not more than *one fluidounce of pus from both limbs*. Of this latter fact we were confident, as we did all the dressing ourselves.

I could report a half-dozen cases of equally interesting character, but have already trespassed too much on your space.

In conclusion, I would say that Dr. Blair's recommendation of this agent to the profession does not in the least refute the assertion of the venerable Solomon, that "There is nothing new under the sun;" for if we call to recollection the wonderful effects of the application of whisky and lily-leaves, and whisky and balsam-apple, by our mothers and grandmothers, we are forced to the conclusion that they, and other more ancient dames, from whom they learned the art, were unconsciously using an article of no little value, but that the credit was given to substances which only served as spongy compresses to retain the fluid. I have never used Dr. Hewson's dry-earth dressing; not that I think it has no virtue, for the high standing in the profession of him who recommends it is sufficient to satisfy me that it is valuable, but where one so much more convenient and pleasant to use is at hand, I would seek for nothing else.

CHAMBERSBURG, PA.

TRANSLATIONS.

PHYSIOLOGICAL RESEARCHES ON DIGESTION IN THE LARGE INTESTINE OF MAN.—Drs. Czerny and Latschenberger communicate to *Virchow's Archiv*, vol. lx., 1874, an account of certain experiments performed by them on a patient suffering from an abnormal anus, situated in the right inguinal region, on a level with the crest of the ilium. The rectum was completely separated from the rest of the intestine, so that nutritious enemata could be introduced and withdrawn without any danger of admixture. This condition had resulted from a strangulated hernia, which, having been operated upon, left behind three mucous orifices, separated in such a manner that the internal orifice corresponding to the termination of the large intestine could not receive any trace of fecal matter.

The portion of intestine serving for the experiments, measured from the anus with the aid of a flexible tube, was about eleven inches in length. It was directed away from the fistula, then backwards to the extent of about three inches, then directly down. This last portion, of about eight inches in length, was destined to serve for the experimental study of absorption.

The mucous membrane was completely insensible, and the prick of a needle failed to produce contraction. The use of the induced current was not followed by any effect, but on applying the continuous current lively contractions were produced, which lasted as long as the electrodes continued in contact with the mucous membrane. On introducing the finger into the orifice of the intestine, the latter could be observed to contract strongly, and the mucous membrane rapidly assumed a red color and poured out an abundant secretion.

Character of the Intestinal Juice.—The drops of pure intestinal juice are slightly opalescent, and enclose small masses of protoplasm, occasionally containing drops and globules of oily matter. On any irritation whatever being applied, epithelium becomes mixed with the intestinal juice, which grows turbid. The reaction of the latter, and of the mucus generally, is decidedly alkaline.

Method of Experiment.—The experiments on digestion were made either with the intestinal juice collected, and consequently outside of the intestinal tube, or within the latter itself. In the first case, the albuminous substances, the starch or fat, were placed, together with a certain quantity of the juice, in small test-glasses, the mouths of which were closed with cotton. They were then exposed for two or three hours to a temperature of 95° F.

The experiments on digestion and absorption in the large intestine were made as follows:

The various liquids were introduced into the intestine by means of a caoutchouc tube, one end of which was inserted into the fistulous orifice. When the experiment was terminated, the liquids were removed by the anus. In order to avoid all error, the solutions used were divided into four parts, one of which was introduced every second hour by the same tube, and when the experiment was concluded a certain amount of liquid was allowed to pass through the intestine, in order to remove any matters which might remain. The experiments were made with albuminous solutions, with white of egg, emulsions of fat, and starch.

Experiments in Digestion.—Small morsels of coagulated white of egg, exposed during three hours to the action of intestinal juice at a temperature of 95° F., showed no alteration even when the fragments had been washed with a solution containing one-half per cent. chloride of sodium. Flakes of fibrin submitted to the same conditions underwent no alteration. Olive-oil, beaten up for a long time with the fresh juice,

showed no sign of emulsification. Starch mixed with the juice and exposed whole hours to a temperature of 95° F. showed no trace of sugar. It should be remarked that the juice employed was procured from both the upper and the lower portion of the large intestine. A small bag of gauze filled with morsels of coagulated white of egg was placed in the intestine and allowed to remain there for two months. When removed at the end of that time, the fragments showed no sign of digestion, and were simply roughened a little on the exterior by the action of bacteriæ. From these experiments it was concluded that the action of the intestinal juice of the large intestine and of its mucus, so far as the digestion of coagulated or soluble albumen is concerned, is simply *nil*.

Experiments in Absorption.—To determine the capacity of the intestine for the absorption of water, about f3iv were introduced every fifteen minutes for some hours into the portion under examination. The result showed an absorption of some ten or twelve drachms of water in the space of seven hours.

Experiments made with albumen demonstrated that in the normal condition albumen dissolved in water is absorbed as such by the large intestine. This absorption takes place more rapidly the longer the albuminous solution remains in contact with the intestine. If the latter is irritated by mechanical action or otherwise, absorption becomes hindered or completely arrested. Chloride of sodium hinders absorption, but this salt, even when the intestine has been irritated and general absorption has ceased, continues to be absorbed. Albumen as contained in white of egg is not in a condition to be absorbed without difficulty.

Experiments made upon fatty substances prove that the large intestine absorbs these when they are presented in an emulsified condition; the absolute quantity absorbed is proportioned to the concentration of the emulsion; while on the other hand the relative amount absorbed is proportioned to the length of time during which the fat remains in contact with the absorptive surfaces.

Experiments made with starch show that this substance is absorbed by the large intestine when in a jellied condition; but up to the present time it is impossible to determine whether its absorption takes place while in the form of starch itself, or after previous conversion into sugar.

Conclusions.—The large intestine in man absorbs albumen in solution, as such, as well as emulsions of fat. Starch in jelly is also absorbed, but whether as such or in the form of sugar is not known. Chloride of sodium possesses the property of interfering with absorption, or even checking it completely.—*Archives Générales*, July, 1874. A. V. H.

TRAUMATIC EMPHYSEMA.—H. Fischer (*Sammlung Klinische Vorträge*, 1874, No. 65).—Traumatic emphysema arises most frequently from injuries of the lungs, more rarely from aspiration of the external air through wounds and from degeneration of the tissues (spontaneous emphysema). When the lungs are injured there is no emphysema of the skin, or at least it is of but circumscribed extent, as is also the case when the external wound of the thorax corresponds directly with the wound of the lungs, when the wound itself is of sufficient calibre. If, however, the lungs are injured, and the cavity of the thorax is opened by a narrow oblique wound, or if the wound, through the action of muscular fibres, assumes an irregular form, or if it contain torn bits of tissue or foreign bodies, there arises an emphysema of the skin of more extended dimensions. In such cases, during the act of inspiration little or no air enters through the external wound, but a proportionately larger quantity passes through the wound of the lung. During

expiration the wound of the lung closes, and the air which has collected in the thorax is driven into the meshes of the connective tissue in the neighborhood of the long and irregular canal of the wound. Then, too, traumatic emphysema may be due to injuries of the lung when there is no external wound present; for instance, in cases of fractured ribs when a fragment of a rib perforates the pleura and wounds the lung. Frequently in cases of this character the wound of the lung becomes closed by clotted blood or adhesive inflammation, and then no emphysema is caused. When portions of the lung which are adherent are injured by fractured ribs, or if the injured lung is drawn back into the subcutaneous wound by the elasticity of the rib, traumatic emphysema ensues, but pneumothorax is wanting. Traumatic emphysema may arise after contusions of the lungs not attended by fracture of the ribs, or only be due to powerful compression of the lungs while the escape of the air through the trachea is impeded. In all cases of this kind, contusions and small ruptures are caused in the lung-tissue, and first occasion an intralobular emphysema, which gradually extends to the root of the lung, and finally passes upward in the trachea and makes its appearance in the neck. Traumatic emphysema can also arise in cases in which the thorax alone is opened, the lung not being injured, since the air which has made its entrance into the thoracic cavity can be forced by the expanding lung into the subcutaneous and intermuscular connective tissue. In these cases the emphysema is usually unimportant, since the pneumothorax soon becomes of such high degree that the entire side of the chest upon which the wound is becomes motionless, and consequently no more air is forced into the meshes of the connective tissue by the movements of inspiration. In a similar manner to that due to injuries of the lungs, traumatic emphysema arises also from wounds of the larynx. In wounds of the intestine, emphysema is of rarer occurrence, since the gases for the most part escape into the cavity of the abdomen, and it is usual to see this complication only when the fixed part of the large intestine is wounded upon its posterior aspect. It is more common to see emphysema after the so-called inward rupture of the intestine in consequence of disease, as in cases of strangulation followed by gangrene of the gut. On the head a form of emphysema is met with which is due to the passage of air from the pharynx into the cavum tympani, and thence through the pores of the mastoid process into the tissues of the scalp.

Emphysema of the eyelids occurs frequently in cases of fracture of the bones of the face, when the fractures extend into the nasal and frontal cavities. This form of emphysema may also occur after rupture of the lachrymal sac from violent expiratory efforts, and sometimes after gangrenous ulcers of the mouth following measles, wounds of the buccal mucous membrane, or extraction of teeth. Traumatic emphysema due to the aspiration of the outer air through wounds occurs but rarely. In this category belongs emphysema arising after rupture of the œsophagus, in cases of long narrow wounds, and in cases of tenotomy and complicated fractures. Fischer has observed spontaneous emphysema due to degeneration of the tissues in five cases of fractures and severe contusions in which there were extravasations of blood of large size. It is due to the escape of gases into the connective tissue from the extravasated blood. This driving out of the gases from the blood is favored by the acid reaction of the muscles, which is due to the bruising and tearing which they have undergone. The air which has collected in the connective tissue is finally absorbed by the blood-vessels; some of it, however, vanishing by the same way that it came. There are no difficulties attending the

diagnosis of emphysema, but spontaneous emphysema is often confounded with gangrenous. In a majority of cases when due to trauma the occurrence of emphysema has no influence upon the prognosis, and no treatment is indicated. If increased dyspnoea, due to large quantities of air in the interstices of connective tissue, comes on, small punctures through the skin are advised. As a rule, however, cases of primitive emphysema do not require speedy operative interference, while the contrary practice is to be enforced in such as are gangrenous in their origin.

W. A.

EXTIRPATION OF THE SCAPULA AND ARM.—Veit (*Inaug. Dissertation*) reports an operation of V. Langenbeck's, in which, in consequence of a round-cell sarcoma, starting from the head of the humerus and extending into the muscles of the thorax and the scapula, that bone and the arm were extirpated. The clavicle was first exposed by an oblique incision, and divided by a bone-forceps. By this procedure the subclavian artery was exposed; it was surrounded by a catgut ligature, and divided, as were also the subclavian vein and the brachial plexus of nerves. From the first incision, a second was then made to the lower angle of the scapula, the muscles dissected away, and finally a third incision was made through the axilla, meeting the second, and the scapula dissected out. The patient, a laborer, aged 17 years, reacted well at first, but died from a hemorrhage from the subclavian artery on the sixth day. At the autopsy it was found that the ligature had been applied close to the origin of the transversalis colli, so that the formation of a proper clot had not been possible. In the lungs were also found numerous metastatic deposits from the tumor.

W. A.

SUBCUTANEOUS INJECTIONS OF AMMONIA IN MALIGNANT PUSTULE.—M. Collin read, at a recent meeting of the Académie de Médecine (*L'Abeille Méd.*, August 10, 1874), an account of certain experiments made by himself upon the action of this remedy. His conclusions may be briefly stated as follows: 1, ammonia can be borne in the veins in strong doses (perhaps in man forty-five drops), but it is possibly a sedative rather than a diffusible stimulant, as it abates the general temperature in certain cases to the extent of 2.5° Cent.; 2, it acts as an irritant when introduced into the cellular tissue; 3, it neither destroys nor neutralizes the virus of malignant pustule.

A. V. H.

THE USE OF THE CATHETER AFTER URETHROTOMY (*Milit. Med. Jour.*, 1873, vol. cxviii. p. 37).—In six cases upon which Dr. Kadoski performed internal urethrotomy, he was prevented from introducing the catheter after the operation, as he had intended doing, and from the results which he attained he is satisfied that it is not necessary to use catheters or bougies in these cases until several days after the operation. He thinks that by thus postponing the introduction of these instruments the urethra escapes much irritation, and the patient much pain, and that there is no danger of the stricture which has been divided reuniting.

W. A.

ONYCHIA MALIGNA.—Wilkomiski (*Mosk. Med. Ztg.*, 1873, No. 37) has used the nitrate of lead in cases of onychia maligna, with the best effects. All that remains of the diseased nail is to be removed with scissors, and the nitrate of lead, in substance, to be spread on the diseased surface, there being no necessity for the application of any bandage. The slough separates after a few days, leaving a clean surface, upon which a new nail forms. He describes five cases of the disease in each of which this application seemed to have a specific influence.

W. A.

PHILADELPHIA MEDICAL TIMES.

A WEEKLY JOURNAL OF
MEDICAL AND SURGICAL SCIENCE.

The Philadelphia Medical Times is an independent journal, devoted to no ends or interests whatever but those common to all who cultivate the science of medicine. Its columns are open to all those who wish to express their views on any subject coming within its legitimate sphere.

We invite contributions, reports of cases, notes and queries, medical news, and whatever may tend to increase the value of our pages.

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EDITORIAL.

CORONERS' INQUESTS—SINGULAR VERDICTS.

THE loose and imperfect manner in which coroners' inquests are held in many parts of our country has often been the subject of just animadversion, both by the practitioner of medicine and the practitioner of law. When we call to mind the sort of *material* composing the great majority of coroners' juries, we need not be much surprised, but shall rather be amused, at some of their extraordinary verdicts; albeit these said verdicts do not reflect very creditably upon the medical man who is presumed to make the autopsy and to instruct the less-informed jury as to the true nature of the cause of the death.

Not very long ago a curious case of this kind occurred in the neighboring State of Delaware. A person died under very suspicious circumstances, strongly pointing to strychnia as the cause of death, and also indicating a certain individual as the homicidal agent. A post-mortem examination was made, but (as we are informed) no chemical analysis was instituted for the purpose of settling this all-important question. The adroit examiner, and the no less far-sighted jurors summoned on the inquest, arrived at the sapient conclusion—simply *from the inspection of the stomach*—that it was a case of *suicide*! Truly, a most comfortable conclusion for the suspected culprit.

About a month ago, a respectable man died very suddenly in this city, at Petry's restaurant,

corner of Walnut and Broad Streets, being found in a dying state on his bed in the morning. From the circumstance that he had complained the evening previous of being in great trouble, it was very naturally conjectured that the deceased had committed suicide by poison; but no evidence of this was furnished from the surroundings, such as the discovery of any bottle, paper, etc. The *Evening Telegraph* of August 8 contains the following notice in reference to the matter: "Dr. Updegrove, who made a post-mortem examination of the body, testified that the appearances were of a negative character, as usual in cases of narcotic poisoning. The lungs were congested, and in the stomach was found an undissolved powder. Verdict, suicide by narcotic poisoning." Now, we are free to confess that we are far from being satisfied with this verdict, *based upon the above evidence*. If the paragraph from the *Telegraph* fully expresses the character of the post-mortem examination, we do not hesitate to condemn it as altogether imperfect and inconclusive. We hope, for decency's sake, as well as for that of justice and humanity, that the coroner's physician has been incorrectly reported. Surely, in a case of suspected narcotic poisoning the *brain* ought not to be omitted; yet nothing whatever is stated in reference to this all-important organ. The only pathological condition mentioned is congestion of the lungs. Now, this lesion may or may not accompany poisoning from morphia,—the alleged cause of the death; but assuredly no one is authorized to draw any positive inference from it. But the most curious point about the matter is the statement that "in the stomach was found an undissolved powder;" and then follows the verdict of the erudite jury,—"*suicide by narcotic poisoning*!"

We do not wish to be hypercritical, but, as we must presume that the "undissolved powder" was believed to be some salt of morphia (since it was termed a *narcotic* poison), we confess to being unable to perceive the logic of the conclusion arrived at. For, if we remember our chemistry aright, the salts of morphia are *soluble*, and would not be found after death in the stomach in the form of "an insoluble powder;" and, secondly, any medical man undertaking the very responsible office of determining the cause of death in a medico-legal case, and presuming to form any opinion under the circumstances without a thorough and exhaustive chemical analysis of what is simply described as "an insoluble powder," is guilty, to say the least, of gross carelessness, and of what in some countries would be called *criminal* recklessness.

We use strong language, but we speak advisedly

on this subject. It is our duty to hold up to deserved reprobation this system of loose and careless medico-legal examination, examples of which are continually presenting themselves before the public. Once satisfy a coroner's jury that the person is really dead, and the ascertaining of the true *cause* of the death is often a mere farce. An "undissolved powder" will unravel the mystery before one jury, while a simple "inspection of the stomach," as in the Delaware case, will enable another jury to determine the still more intricate question of homicide or suicide without the necessity of a trial!

CORRESPONDENCE.

THE UNIVERSITY AND HOSPITALS OF BERLIN.

TO THE EDITOR OF THE PHILADELPHIA MEDICAL TIMES:

AS a medical centre, Berlin has held a very high position for many years. Within the last decade, however, as the city has rapidly increased in population and commercial prosperity, the government has, with its accustomed beneficence to public institutions, spared no expense or effort to make this the great intellectual centre of the nation, as Vienna is of Austria, and Paris of France. A new impetus has been given to every department of the university. Distinguished men in all departments of science and literature have been called from every section of the country to fill the chairs, until the corps of instructors now numbers nearly one hundred and fifty professors and associated teachers.

The university building, a very extensive edifice, is situated in the heart of the city, and upon its principal thoroughfare, the "Unter den Linden," on which are also the palaces of the emperor and royal family, nearly opposite.

Here are delivered the greater portion of lectures, on which about two thousand students are in attendance. As many as three thousand have matriculated here in one semester; but, owing to the high prices of living since the Franco-Prussian war, the number has very much diminished. As might be supposed, the majority of the medical lectures are delivered elsewhere, principally in the hospitals.

The course of medical instruction here, and in all the German universities, is very clearly fixed. Each student desiring to pursue the regular routine of studies must present testimonials of having passed the examinations of the gymnasium, which corresponds to our colleges. The course of instruction there is nearly the same as that in our schools, rather more attention being paid to the languages, and not so much to mathematics and the natural sciences. Having matriculated in the university, he spends the first two years in the study of anatomy, physiology, chemistry, and *materia medica*. Opportunities are always afforded for practical working

in the chemical laboratory, but an attendance upon lectures is all that is absolutely required.

At the end of two years the student presents himself for examination upon the above branches, after which he is first known as a candidate for the degree of doctor of medicine. Not until then is he permitted to attend the clinics. Subsequently his course is much at his own disposal, and he can attend many or few lectures as his inclination prompts. He must, however, when he appears for examination at the end of the fourth year, show that he has attended lectures for eight semesters, and that for three semesters he has attended the various clinics.

There are some students with more money than brains, and more brains than they care to use,—more fond of the "kneipe" than of the clinic, and of the rapier than of the scalpel, preferring to pay homage to Bacchus rather than to Æsculapius,—who spend six, eight, and even ten years in some cases in the university before they appear for examination.

After the student has received the degree of doctor of medicine, he must then present himself for what is known as the "Statis examination" before he can receive license to practise. This examination is always necessary. A candidate may present himself for the Statis examination without having previously received the degree of doctor, and if his examination be satisfactory he may receive license to practise.

The principal hospitals here frequented by students are the Charité, the old municipal hospital, containing fifteen hundred beds, and the "Königliche Klinikum der Universität," containing about one hundred and five beds. The latter was intended originally to subserve a more simple purpose, as the name would indicate. Here are received only purely surgical cases, and none of those but the best which may serve for purposes of class-instruction, all others being sent to the Charité. There are also the Augusta and the Bethanien, containing respectively one hundred and two hundred and fifty beds,—both modern structures, and admirably arranged, but not visited by students, owing to their great distance from the university. Besides these, there is also the "Neue Allgem. Stadt Krankenhaus," or New Municipal Hospital, which is just completed, but not yet occupied.

A very great effort has been made to secure the most approved plans in the construction of the Bethanien and Augusta Hospitals. In the New Municipal Hospital the effort has been made to combine every improvement which experience has pronounced valuable, and the city has expended on its construction alone over one million dollars. The plan has been adopted of having a number of separate buildings at considerable distances from one another. Of these there are fourteen in all; twelve being designed exclusively for the use of patients,—six for those suffering from internal diseases, four for surgical cases, and two for contagious diseases.

The great fault connected with the management of this hospital is a law by the city authorities prohibiting

the use of the material found in its wards for the instruction of students. The great body of charity patients who now find a home in the Charité will naturally seek a place in an institution where they will not be exposed to the gaze of students and to that mystical scientific barbarity which is always supposed, by the ignorant, to be attendant upon hospital medical instruction. The Charité itself must thus lose in interest, if it be not entirely supplanted by such a rival, and medical students will find a more congenial field for study in other cities, whose authorities recognize and acknowledge the claims of science upon their hospitals.

Four-fifths of all the hospital instruction received by students here is given in the Charité.

Prof. Martin, in whose lectures I am especially interested, holds a high rank here as an obstetrician and gynæcologist. He superintends the gynæcological department of the Charité, and also has entire control of the "Königl. Entbindungs Institut," or obstetrical department of the university. During the past week he has performed the operation of ovariectomy four times, making in all eight operations of this nature during the semester. Of his manner of performing the operation, and his general success, I may have occasion to speak another time.

G. WILDS LINN.

BERLIN, July 30, 1874.

REVIEWS AND BOOK NOTICES.

A PRACTICAL TREATISE ON THE SURGICAL DISEASES OF THE GENITO-URINARY ORGANS, INCLUDING SYPHILIS. By W. H. VAN BUREN, A.M., M.D., and E. L. KEYES, A.M., M.D. New York, D. Appleton & Co., 1874.

This handsome volume is an outgrowth of the later phase of teaching, in which each of the subdivisions of medicine has a separate exponent. It is doubtless a fair expression of what is taught of the above-named subjects at the Bellevue College; and a careful perusal has convinced us that they are taught well. We have rarely read better descriptions, or more detailed yet explicit directions for treating urethral stricture and all diseases pertaining to the bladder and associated parts. We have the judgment of the expert evident on every page. The anxiety to have each department well represented is shown in the chapters on the syphilitic diseases of the eye and ear, which have been written by well-known authorities on the affections of these organs. We cordially welcome the book, and trust and believe it will meet with success.

But we cannot resist the conclusion that a mistake has been made in including syphilis in a volume treating of diseases of the genito-urinary tract. We are informed in the preface that the book has been prepared because special subjects are either omitted or slurred over in the general text-books. Yet here, within a space of six hundred and sixty-six pages, four hundred and seventy-two are devoted to diseases of the genito-urinary system, leaving two hundred and ninety-four for the consideration of syphilis. For our part, we would rather have had the proportion reversed; or, what would have been still better in our judgment, the scope of labor enlarged, and a separate volume devoted to each subject. Apart from the meagreness with which many subjects pertaining to syphilis have been treated, such, for example, as

the specific lesions of the nervous system, and hereditary syphilis, to say nothing of the provokingly elementary accounts of the syphiloderms as compared with the elaboration of the most insignificant affections of the penis, we object to the association on general grounds. What is it, we ask, that unites syphilis and diseases of the genito-urinary system? Nothing but the fact that the majority of primary sores are to be studied on the external genitals,—a fact not of first importance, compared to the fact of inoculation. The syphilographer is indifferent whether the chancre has appeared on the genitals or any other part of the body; and in questions of hereditary syphilis, and in transmission of secondary syphilis, the study of the primary lesion is of no value whatever. Nor do we understand why such remote subjects as urethral stricture or spermatorrhœa, and constitutional syphilis, should be treated together in a special text-book, unless, indeed, it be out of respect to certain rather ancient ideas,—ideas to which our authors have in no way committed themselves.

It is to be hoped that a certain carelessness in diction which mars portions of the book may be corrected in future editions. Our authors speak of a "type case" of atrophy of the bladder; of the "cut-off" muscles of the urethra; of involuntary ejaculations during sleep being nature's safety-valve (!); of a lymphatic (?) young man virgin (!!); of all antecedent venereal disease; and of inflammation of the glands of Cowper as *Cowperitis*. We are told that the bladder is "almost invariably unique," that "lithotomy is respectable for its longevity," that the "prognosis of tubercular prostatitis is bad," that "a catheter passed into the bladder insures the right of way to the urine."

Such inaccurate and inelegant expressions are, unfortunately, heard too often in the amphitheatre, but are, to say the least of it, out of place in a text-book. H. A.

LES NEUROSES MENSTRUÉLLES. Par le DOCTEUR BERTHIER. Paris, A. de la Haye, 1874.

We have perused with some interest this treatise, which is, in fact, a compilation and comparison of cases recorded in medical literature already, with such comments upon them as to show their connection with and relation to excess, suppression, or irregularity of the menstrual flux. To these are added the views of the author on the physiology of the secretion and its intimate association with the condition of the nervous system, and on the subject of sympathy and reflex phenomena,—views which are correct so far as they go, but seem to us more like mere truisms than a statement of the actual status of our knowledge in this latter half of the nineteenth century. Perhaps they are necessary in the atmosphere of Paris, where the anatomico-physical school of thought has almost stifled the vitalist doctrines of Montpellier. "Truth crushed to earth will rise again," and from time to time there come to us utterances from Paris itself pointing to a consciousness on the part of the leaders of medical thought in that Vanity Fair that even in such apparently capricious things as congestions there is a force, an archæus, that obeys laws other than those of ordinary physics. To us in this country who have been taught to recognize this *vis insita*, there is much that seems like groping in the dark, and many "most lame and impotent conclusions" from facts such as those recorded in the present volume. And yet it is precisely such testimony that we need, coming from an entirely different point of view, to confirm our faith, which might otherwise be rudely jostled, not to say severely shaken, by the demonstration on the part of the physical-theory advocates of how many apparently pure mental phenomena are after all the result of purely physico-mechanical conditions. The cases cited by Berthier are not generally rare ones; there is hardly any practitioner of large

experience who will not be able to call to mind some similar ones which he has witnessed and perhaps not thought it worth while to record even in his private note-book. And yet, when they are thus arranged in proper sequence, we see how they prove by cumulative argument overwhelming in force the truth and importance of the influence reciprocally of the nervous system and the generative system upon each other. Nervous irritability and the "irritable uterus" are things which we would gladly consign to the limbo of the past; but, like Banquo's ghost, they will rise and confront us in the midst of our medical "feast of reason." Nor will they be laid until we learn that perverted, suppressed, or excessive function will and must lead first to functional, then to organic, disease; and that not only of the organ which is thus subjected to unhealthy influences, but of one or all of the others which are allied to it by those subtle, impalpable, and yet undeniable influences which we call "sympathies." Our medical predecessors, with their far inferior means of physical diagnoses, relied more upon these sympathies for their diagnosis and indications for treatment than we do, and mastered their meanings in a mode which is for many of us a "lost art." Which one of us is not rather disposed, for instance, to think of the tongue as deceitful above all things, in comparison with the means of information afforded by auscultation and percussion, by the thermometer and the ophthalmoscope? And yet our predecessors were grand old practitioners, and accomplished in their day cures as wonderful as some of those we boast of. If we look into their writings with the light of modern science to help us to understand clearly difficulties among which they groped darkly, we shall rise with a profound respect for the acumen which they display, and also with the feeling that there are many of those things in the science of medicine which our philosophy scarce dreams of as yet, in the solution of which we may gain much assistance, as they did, from the patient, laborious investigation of symptoms which now, unless we can correct them with or explain them by our present theories, we are too apt to ignore.

One other thought has suggested itself to us in perusing this volume. If nearly one-fourth of the life of women between fifteen and forty-five years of age is passed, as we know, in a condition which renders them liable to severe nervous disturbance, and if one woman out of every five (we fear an accurate statistical statement would make these figures nearer to two out of three) actually experiences such perturbation in her organism as to affect her power of active exertion, of untrammelled thought, of calm judgment in a greater or less degree, is there not in these facts the most convincing argument against the adaptedness of women as women for the exercise of such professions as, like our own, demand coolness, clearness of head, steadiness of hand and eye, and, above all, that all the faculties shall always be ready, at an instant's warning, for their fullest exercise? In other professions arrangements might be made to obviate the regular recurrence of the greater or less disability entailed by the menstrual epochs, but in ours it seems an obstacle that, lying in the nature of things as regards the woman of our day, is not likely to be overcome. J. C. M.

THE PHYSIOLOGY OF THE CIRCULATION IN PLANTS, IN THE LOWER ANIMALS, AND IN MAN. By J. BELL PETTIGREW, M.D., etc. London, Macmillan & Co., 1874.

The author's design in the arrangement of the contents of this volume is "to give a comprehensive account of the circulation and the apparatus by which it is effected in plants and animals." Judged by this standard, the book is disappointing. The descriptions

of the circulation in plants are faulty and incomplete, and those of the lower animals are mere fragments, of no value whatever. The most elaborate work is devoted to the circulation of the vertebrata; and one may infer how far the author aids the student who reviews his "comprehensive account," when the batrachian and reptilian types of life are confounded.

The book will doubtless prove suggestive to the special student of physiology, who will be pleased with the author's observations on the heart's action, while he will justly esteem the chapter on the fetal circulation, the mechanism of the valves of the vascular system, and the ganglia and nerves of the heart, as elaborate essays, valuable for reference.

The motive in publishing such a collection of a lecturer's memoranda has not been vouchsafed us by the author, nor do we profess to be familiar with the points of the canvass now pending for the chair of physiology in the University of Edinburgh. H. A.

THE PHYSIOLOGY OF MAN. By AUSTIN FLINT, Jr. Vol. V. New York, D. Appleton & Co.

This volume, embracing the subjects of the special senses and generation, completes the great work of Prof. Flint, and we congratulate him upon the completion of his task, and upon having added to American literature the most thorough and complete work on physiology in the English language. The preceding portions of this work have been noticed in this journal from time to time, as they appeared, and it seems scarcely necessary to present a detailed review of the present volume, in which the general tone and style of the previous volumes of the work are well maintained. The completed work of Prof. Flint is too large for use as a text-book, but is par excellence the book for those practitioners who wish to keep themselves upon the level of the day in regard to the great sciences which underlie the practice of medicine.

GLEANINGS FROM OUR EXCHANGES.

PERCHLORIDE OF IRON IN POST-PARTUM HEMORRHAGE.—Dr. Lombe Atthill, in a paper read before the Dublin Obstetrical Society, states that he has arrived at the following conclusions:

1. That cases of post-partum hemorrhage occur in which the injection of the perchloride of iron or some similar styptic is alone capable of arresting the hemorrhage.
2. That the injection of such styptic does not necessarily increase the tendency which exists in such cases to the occurrence of pyæmia, septicæmia, or peritonitis.
3. That this treatment is specially applicable to anæmic patients.
4. That while it should never be had recourse to unnecessarily, it should not, on the other hand, be delayed too long.

ANEURISM OF THE LEFT SUBCLAVIAN ARTERY CURED BY DISTAL LIGATION (*The Western Lancet*, July, 1874).—In a case of subclavian aneurism of a year's standing, attended with partial paralysis of the left arm from pressure on the brachial plexus and great anæmia due to pressure on the thoracic duct, Professor Toland decided to perform the distal operation, and the artery was tied at its exit from the axilla. The pulsation in the tumor was immediately lessened, and gradually decreased up to the sixth week from the date of the operation, after which no bruit or pulsation could be discovered. The tumor grew smaller, the collateral circulation became fully established, the paralysis almost entirely disappeared, and the patient gained considerably in weight.

AMYLOID AND FATTY LIVER IN RELATION TO OPERATIONS (*The Lancet*, August 8, 1874).—Mr. Richard Barwell details two cases of hip-disease in children, which had been attended with prolonged suppuration, and in both of which a cachectic condition had ensued, attended with extreme enlargement of the liver. Operations for the relief of the joint-trouble—in the one case amputation at the hip, in the other excision of necrosed bone—were both followed by great improvement and subsequent recovery, *with a gradual return of the liver to its normal size.*

We often see in such cases as these, where free suppuration has existed for a long period, a uniform increase in the size of the liver, which does not affect by pressure or obstruction the portal circulation, since it is not accompanied by ascites; and, though it may diminish, it does not annihilate the secreting function of the gland, since the fæces are colored with bile, and since there is no jaundice.

This enlargement is due to the deposition in the constituents of the organ either of oil-globules (the fatty liver), or of a material called amylaceous (the amyloid or lardaceous liver).

Now, in healthy life fat is frequently present in and is often removed from the liver. It is therefore plain that recovery from its morbid accumulation in that organ is a much more easy process, a far more likely event, than restoration to the normal condition of a liver infiltrated with so immobile a material as that which constitutes the amyloid deposit.

Amyloid liver may be suspected if the organ attains a very large size, if there be obstinate and recurrent diarrhœa, with cast-off villi in the excreta but no pus or sign of ulceration, or if there be albumen in the urine.

If, after careful investigation on these points, the absence of any sign of amyloid disease save the enlargement of the liver be determined, any operation for the removal of suppuration is not only justifiable, but our imperative duty. Without operation the patient must die; after operation, however hard, large, and changed be the liver, there is a fair, indeed a considerable, chance of recovery.

Mr. Barwell believes that in both his cases there existed amyloid disease of the liver, although he admits that he is unable to prove absolutely his position, and that the whole balance of opinion is that amyloid disease once commenced is of necessity a progressive and fatal malady.

RABIES MEPHITICA.—Rev. Horace C. Hovey, of Kansas City, Mo., writes to the *American Journal of Science and Arts* concerning a fatal disease which is communicated by the bite of the skunk, and which bears certain resemblances to hydrophobia. The rabid skunk seems to have exhausted his mephitic battery, or else has lost the projectile force by which it is discharged. Perhaps the secretion has been checked by the feverish state of the system; or there may be a causative connection between the inactivity of the anal glands and the generation of malignant virus in the glands of the mouth.

The writer, having had his attention called to the disease by an encounter with a skunk, and by the statement of an experienced hunter that the bite of the animal is invariably fatal, opened a correspondence with hunters, taxidermists, surgeons, and others, and obtained the particulars of forty-one cases of *rabies mephitica* occurring in the Western and Southern States. All were fatal except one. Drs. Janeway and Shearer, Surgeons U.S. Army, reported several cases which resulted fatally from the bite of the skunk. Dr. Shearer wrote that he regarded the virus as peculiar to the skunk, as the venom of the rattlesnake is to that

creature, and not an occasional outbreak, as in the case of the wolf or the *rabies canina*. From this opinion, however, Mr. Hovey dissents.

The attack of the rabid skunk is entirely different from the fierce assault of a mad dog. He approaches stealthily while his victim is asleep, and inflicts a deadly wound on some minor member,—the thumb, the little finger, the lobe of the ear, one of the alæ of the nose.

The resulting disease resembles hydrophobia more than it does the effects of ophidian venom. The period of incubation is alike in *R. canina* and *R. mephitica*. It is indefinite, ranging from ten days to twelve months. During the incubative stage, no perceptible change takes place in the circulation.

The spasms of the larynx and œsophagus which occur in *R. canina* are wanting in *R. mephitica*. Nor is the hyperæsthesia of the skin which is so marked in the former disease present in the latter. In hydrophobia the perceptions are intensified, but in mephitic rabies there is a positive loss of perception and volition.

The mode of death is by anæsthesia in both forms of rabies; but in that of the dog the frightful struggles of nature to eliminate the poison are more prolonged than in that of the skunk.—*Boston Medical and Surgical Journal.*

THE ACTION OF STIMULANTS (*The Practitioner*, August, 1874).—Dr. James Ross defines stimulants to be "those agents which determine the living tissues to energize, no matter what the form of evolved energy may be, whether it be heat, electricity, secretion, growth, nerve-force, or contraction." Careful observation shows that by far the greater number of the agents used as medicines act by first stimulating one or other of the tissues of the body to expend energy in some form; and when this action is continued, the second effect is to incapacitate the tissue for further action. The maxim, however, that effects are proportional to their causes is frequently and wrongly assumed to be applicable to stimulants and their effects. We ought to be extremely careful in inferring that because a certain dose of a medicine produces a particular action, an increase or decrease of the dose will produce corresponding variations of the effect. In the experiments of the Edinburgh Committee on the action of mercury it was assumed that because a large quantity of the drug diminished, or did not increase, the quantity of bile, *a fortiori* a small dose cannot augment its flow. The inferences from these experiments are vitiated by the neglect of the relation which subsists between the primary and secondary action of a drug and the opposite effects produced by large and small doses. The facts that a strong dose of curara destroys the irritability of the motor nerves while a feeble dose increases it, that a strong dose of alcohol stupefies the brain while a small dose excites it, and that this relation is found to exist between large and small doses of stimulants of all orders, afford good presumptive evidence that since large doses of mercury diminish the biliary secretion, small doses will be found to increase its flow.

TUBERCULAR SPINAL MENINGITIS WITH DEPOSIT OF TUBERCLE IN THE LIVER AND PERITONEUM (*The Indian Medical Gazette*, July 1, 1874).—Surgeon-Major J. Wise reports a case of tubercular deposit in the meninges of the cord, attended by choreic disturbances, great hyperæsthesia of the surface, active delirium, paralysis of the legs, peritonitis, and a fever, which at first assumed a regular remittent, and then an intermittent, form.

At the autopsy, in addition to the tubercles found in the spinal membranes, the capsule of the liver was found to be studded with them, and the whole of the peritoneal covering of the bowels was infiltrated with hard miliary tubercles.

THE INDUCTION OF PREMATURE LABOR (*British Medical Journal*, August 8, 1874).—Dr. J. G. Swayne reports twenty cases of the induction of premature labor, and describes the method which he prefers, as follows. The patient being in the ordinary obstetric position, the fore and middle fingers of the left hand, well oiled, are to be passed up to the os uteri externum, which is generally sufficiently open to admit the point of one, and sometimes even of both, fingers. A small-sized sponge-tent, about the size, for instance, of an ordinary radish, is to be mounted on a proper stilette, made for the purpose, and passed along the groove between the fore and middle fingers of the left hand, until its point is inserted into the os uteri. The tent is then to be pushed on until a very little of it, not more, perhaps, than a quarter of an inch, projects into the vagina beyond the os uteri. If the os be so high that it cannot well be reached by the finger, the tent may be inserted through a full-sized tube speculum. If also it be very little open, a tangle-tent may be found more convenient to begin with. Care should be taken to push the tent up sufficiently far, as it should be remembered that, two months or so before delivery, there is often a considerable interval between the os uteri externum and internum; otherwise the tent may not pass through the os internum. After the tent is introduced, a piece of soft silk handkerchief may be passed up as a plug to keep it *in situ*. On the day following, this tent should be removed, and a large one inserted, and, on the next day, a tent of the largest size. Generally two, or at most three, tents are required to complete the full dilatation. At this time, probably, labor-pains will set in regularly, and the membranes will rupture. Should this not be the case, the membranes may be punctured, and the most convenient instrument for this purpose is a gum elastic male catheter, of which the end has been cut off, so that the stilette can be protruded at pleasure. Should the pains still be weak or ineffectual, ergot may be given.

The tents employed should be impregnated with carbolic acid.

DIAGNOSTIC POINTS IN CEREBRAL DISEASE (*Buffalo Medical and Surgical Journal*, June, 1874).—From recent investigations into the physiological functions of the brain, Dr. H. R. Bigelow concludes—

1. That grave cerebral lesions may exist without characteristic semeiology.
2. That slight lesions may occasion a train of symptoms indicative of serious organic disease.
3. That a paralysis is caused by the irritation transmitted by the cerebral lesion, inhibiting certain functional actions, and not by the mere circumscribed pressure.
4. That a lesion in the middle line, *i.e.*, affecting both sides of the optic thalami, corpora striata, etc., may produce paralysis of but one side of the body.
5. That a paralysis may exist on the same side with the lesion.
6. That unilateral convulsions are much oftener associated with lesion of the right brain than with lesion of the left.
7. That hysterical paralysis, etc., depends oftenest upon disorganized action of the right brain.
8. That aphasia, agraphia, a mechanical impairment of speech, and mental alienation, are usually associated with disease of the left brain.
9. That the right brain is more capable than the left of producing a paralysis on the same or on the opposite side of the body.
10. Optic neuritis as a cause of amaurosis depends more often on a disease of the right brain than on disease of the left.
11. The symptoms may indicate a double lesion when one is present, and conversely.

POPLITEAL ANEURISM (*British Medical Journal*, August 8, 1874).—Professor Holmes has come to the following conclusions in reference to the treatment of popliteal aneurisms:

1. Rapidly-growing aneurisms, with a thin or imperfect sac, are best treated by immediate ligature, especially when caused by recent violence; and the success of compression is doubtful in aneurisms growing towards the knee-joint, and in all others which advance rapidly.
2. The Hunterian ligature has been about twice as successful in modern hospital practice as the results of the accepted statistics show it to have been.
3. The results of the compression-treatment have given as yet about the same average results as those of the ligature; but these results might be much improved by a more careful employment of the method.
4. Too long persistence in compression is to be deprecated, as being likely to interfere with the success of the ligature.
5. Flexion is often successful when used so as not to distress the patient, and is worthy of a trial in all cases in which it stops or materially checks the pulsation, but should not be long persisted in when it is not at once beneficial.
6. We have no evidence showing the utility of or the need for the less usual forms of treatment, such as galvanism, coagulating injections, manipulation, temporary ligature, or the introduction of foreign bodies.

UTERINE FIBROID TREATED HYPODERMICALLY BY ERGOTIN (*The American Practitioner*, August, 1874).—Dr. George Cowan reports the case of a woman, *æt.* 40, who presented herself for treatment of a fibroid tumor of the uterus, which had originated eight years previous. There were obstinate constipation, uterine tenesmus, swelling of the feet, and pains and numbness in the right leg and side. At the most prominent point of the abdomen she measured thirty-six inches in circumference. The abdominal walls were smooth and shining, and seemed stretched to their utmost. For two weeks one and a half to two grains of ergotin in twenty minims of distilled water were injected daily into the subcutaneous tissue of the abdomen, with the following results: the greatest circumference was reduced to twenty-eight and a half inches; the bowels had acted daily for several days, freely and without the use of medicine; the abdominal walls were greatly relaxed; the presence of several tumors instead of a single one was detected; and the patient much improved in health, strength, and spirits. The treatment being interrupted, she returned to her former condition, but on recommencing the injections she again greatly improved, and is now relieved of nearly all the most distressing symptoms.

Dr. T. Parvin records (*American Practitioner*, May, 1874) three cases of uterine fibroid in which marked benefit followed the use of this method. Dr. A. Reeves Jackson reported to the Chicago Society of Physicians and Surgeons (*Chicago Medical Journal*, June, 1874) five cases, in three of which the results were decidedly favorable. Five other cases were reported at the same time, in all of which the results had been beneficial.

CHLORALUM IN CHOLERA.—The internal use of chloralum in cholera is highly recommended by Dr. Henry Blanc, surgeon in the Indian army. His mode of administration was, one part of liquid chloralum to twenty-five parts of water, an ounce of the mixture to be given every half-hour; also an enema containing sixteen ounces of the mixture to be administered every hour. Undiluted chloralum sprinkled on and around the bed. Remedy given less frequently as the reaction became more completely established.—*St. Louis Med. and Surg. Jour.*, July, 1874.

TWO CASES OF SPONTANEOUS RUPTURE OF THE UTERUS (*New York Medical Journal*, August, 1874).—Dr. W. T. Lusk records the case of a woman, æt. 32, in her tenth pregnancy, who was taken with labor-pains about the middle of the day. At 7.30 P.M. a breech-presentation was recognized; at 11.30 P.M. the membranes broke; at 3 o'clock sudden collapse occurred, the pulse was hardly perceptible, the breathing hurried, and the extremities cold. She complained of pain in the right hypochondriac region, and of intense thirst. At 3.30 a dead child, weighing ten pounds eight ounces, was extracted. The woman never rallied, and died at 7 o'clock. At the autopsy, a laceration involving both the peritoneum and muscular structures was found crossing the middle of the cervix and stretching up in the right side so as to involve a portion of the body. No thinning or abnormal condition of the uterine tissues was noticeable.

In another case, a woman, æt. 38, was pregnant for the sixth time, and when she came under observation the membranes had broken, the labor-pains had ceased, and she was in an advanced stage of collapse from hemorrhage. A male child much decomposed was delivered, and the patient died with symptoms of shock. The autopsy revealed a large laceration communicating with the peritoneal cavity, and extending across the posterior surface of the uterus just above the cervix. A smaller laceration was found in the anterior surface, not extending through the peritoneum, but lifting it up so as to form an enormous thrombus.

MISCELLANY.

HYDROPHOBIA AFTER AN INCUBATION OF THIRTY MONTHS.—A medical man recently died in the Paris Maison Municipale de Santé (a valuable institution, being a well-appointed hospital for patients able to pay the charges, which vary according to the accommodation), of the most undoubted symptoms of rabies. Dr. Féréol, who had the management of the case, gives the following summary. An individual enjoying perfect health, temperate in his habits, and with no hereditary propensity to insanity, is seized, after laboring under low spirits for a few days, with fits of rabies, which carry him off in three days. On a post-mortem examination the lesions usually observed in cases of hydrophobia were found. Two years and a half before the outset of the fearful disease which destroyed him in so short a time, the patient had been bitten by a bitch which was in a rabid state. The animal was examined after death by a veterinary surgeon, who certified to the existence of rabies. It should, moreover, be observed that the bitch, at the time she became rabid, was suckling a pup, which died hydrophobic three weeks after the mother.

M. Féréol, under whose care the patient died, has sent an elaborate essay to the Academy of Medicine on the case. A lively and instructive discussion is expected. The essay concludes with the following deductions. 1. The incubation of rabies, which is mostly limited within the first two months after inoculation, may exceptionally last much longer, and may reach eighteen months, or even two years and a half. 2. The symptoms of the disease are generally of a uniform description, but they may assume various aspects under the

influence of numerous agents; as insanity, alcoholism, hysteria, etc. There are, however, certain signs, such as spasm of the glottis, a peculiar mode of sputation, and the symptom known under the name of aerophobia, which belong especially to rabies, and which allow of the diagnosis of the disease, although accompanied by the above-named complications. 3. Idiopathic or imaginary rabies, which is not generally fatal, may end in death: in such case the symptoms will yield sufficient reasons for holding that actual rabies did not exist. 4. The bronchial spuma with rabid patients plays an important part in the phenomenon of sputation, and it may be safely affirmed that the principal symptoms as well as the principal lesions of rabies, in the human subject, are concentrated upon the function of respiration. The characters of the breathing distinguish rabid hydrophobia from the cases of hydrophobia depending on a non-virulent cause.—*London Lancet*.

"CAN ANY GOOD THING COME OUT OF NAZARETH?—I, of course, in common with all sensible people, have long since abandoned the idea that the ablest medical men are always to be found in the largest medical centres; for the history of this country, with that of all other countries, shows that very often the men who give to medical science its greatest improvements—whose genius is so great as to be impressed upon the medical history of the times—come from rural hamlets and small country towns. Velpeau, Magendie, Trouseau, Sir William Gull, Sir James Simpson, Sir Henry Thompson, in Europe; Warren Stone, Eve, Dudley, McDowell, Gross, Sims, and a host of others, in this country, all in their lives illustrate this fact."—*New York Correspondent American Medical Weekly*.

This is undoubtedly true; but it is no less true that these great men, with rare exceptions, sooner or later settle in the medical centres.

ONE of the religious sect known as "The Peculiar People," who object to calling in a physician on account of its showing a lack of faith in God, was recently held in England for trial on the charge of manslaughter. His child had died of pleuritis and pericarditis without professional attendance.

ACCORDING to the statements of the *London Lancet*, Sir William Thompson must be already *en route* for this country.

M. CULLERIER, the Parisian syphilographer, died August 3.

OFFICIAL LIST

OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U.S. ARMY, FROM AUGUST 25 TO AUGUST 31, 1874, INCLUSIVE.

SMITH, A. K., SURGEON.—Granted leave of absence for thirty days, on Surgeon's Certificate of Disability. S. O. 135, Department of the Missouri, August 26, 1874.

WRIGHT, J. P., SURGEON.—Relieved from duty at Fort Hays, Kansas, and assigned to duty as Chief Medical Officer, District of New Mexico, Santa Fe, New Mexico. S. O. 132.

SATURDAY, SEPTEMBER 12, 1874.

ORIGINAL COMMUNICATIONS.

AN INVESTIGATION INTO THE ACTION OF VERATRUM VIRIDE UPON THE CIRCULATION.

BY H. C. WOOD, JR., M.D., ASSISTED BY JOS. BERENS, M.D.

(Concluded from page 771.)

PART II.—VIRIDIA.

Section A.—Action on the Circulation.

MR. MITCHELL announced some time since that he had found jervia in the root of veratrum viride. In a more recent, and as yet unpublished, investigation, he failed to get what he was looking for,—the viridia of Bullock,—and was finally forced to conclude that his jervia was the same as the viridia of Bullock. After he had placed some of his jervia in my hands, my first experiments were directed to discovering whether this conclusion was true. Without giving these experiments in detail, it is allowable to state that the symptoms induced by his jervia were precisely those which I had seen caused by viridia. The same general quietness and weakness, the same peculiar trembling or muscular thrill ending in general convulsions, the same free salivation and absence of vomiting and of purging, were present in either case. In elaborate cardiometrical experiments the two alkaloids have also given identical results. I have no hesitation in asserting that they are one. As to the reason or cause of the asserted chemical differences I will not at present offer an opinion, but leave the Messrs. Bullock and Mitchell to settle it between them.

The general effect of viridia upon the circulation is well portrayed in the following experiments, which have been already published with more detail in the *American Journal of the Medical Sciences* for January, 1870.

Experiment XXXIII.—A moderate-sized cur.

TIME.	DOSE.	PULSE.	PRESSURE.	REMARKS.
0	m.		120-160	Viridia injected into thigh.
5	"	gr. ½	120-160	
15	"		120 (maximum.)	
20	"		65-95	Dog quiet. Injected into peritoneal cavity. Convulsions. Dog quiet.
30	"	gr. ½	65-75	
40	"			
45	"		125	
50	"		75	

Experiment XXXIV.—A stout Scotch terrier.

TIME.	DOSE.	PULSE.	PRESSURE.	REMARKS.
0	m.	gr. 1½	186	Hypodermically.
5	"		120-130	
10	"		115-125	
15	"		160	Dog quiet.
20	"		110-120	
25	"		128	
30	"		80	
35	"		85-105	

These two experiments show that when viridia in suitable amount is given to a dog, the pulse as well as the blood-pressure falls very decidedly, without the production of marked symptoms other than general weakness. In order to confirm this, and at the same time to corroborate the opinion already expressed, that jervia and viridia are one thing, the following experiment was performed with some jervia obtained from Mr. Mitchell:

Experiment XXXV.—A stout slut.

TIME.	DOSE.	PULSE.	PRESSURE.	REMARKS.
0	m.	135	105-120	Injections into the femoral vein. The jervia very impure.
2	"	132	105-120	
2½	"	gr. 1-20		Dog breathing heavily. Doubtful how much went in.
4½	"	128	95-100	
6½	"	112	95-100	
7½	"	52	30-65	
8½	"	76		
9½	"	83	85-90	
10	"		95-105	
12	"	88	90-100	
15	"	112	100-110	
15¾	"	gr. ½		
19	"	90	70-75	Dog very quiet.
21	"	92	65-70	
22½	"	96	90-95	
24	"	92		
27	"	gr. 1-20	100-105	
28	"	72		
30	"	48	45-60	Dog quiet.
34	"		70-80	
35	"		75-85	
36	"			
47½	"		85-90	Clot. When dog struggles, pressure rises to 100. Began to fall almost instantly.
48½	"	gr. 1-12		
49	"	84	50-60	
49½	"		55-65	
50½	"		70-75	The dog has been struggling, to which the rise in pressure is probably due. Respiration is affected, but only in small degree.
55	"	gr. 1-12	85-90	
58	"	gr. ¼		Clot. Most violent, persistent convulsions have come on. The limbs shaking violently, all the muscles rigidly contracted. This, together with the violent respiratory efforts, drove the mercury up to 140, and even momentarily to 180.
66	"		100	
73	"		60-75	Tube has been placed in carotid. The dog momentarily quiet. Convulsions have again set in. There is no perceptible cardiac impulse.
74	"		110-125	
76	"	gr. ¼	85	Dog still convulsed.
78	"		90	
81	"		75-85	
83	"		75-80	
				Clot. Respiration ceased. Heart found to be still pulsating; this continued for some time after entire arrest of respiration.

In comparing this experiment with those previously published, it must be borne in mind that in the last experiment the poison was thrown directly into the veins, and that therefore much more intense and especially more sudden effects are to be looked for; it should also be remembered that it is probable the specimens furnished by the Messrs. Bullock and by Mr. Mitchell were not of equal purity. Due allowance being made for these disturbing causes, I do not see how a close study of the records can fail to reveal the identity of the two alkaloids. The great rise of

pressure during the later periods of the last experiment was certainly owing entirely to the convulsions, the mercury in the cardiometer falling so soon as the muscles relaxed; the phenomenon finds its counterpart in the first experiment with viridia.

Section B.—Action on the Heart and its Nerves.

In endeavoring to discover the exact method in which viridia lowers the pulse and blood-pressure, I first investigated its action upon the cardiac inhibitory system, and made the following experiments: those marked (V.) were performed some years since with Mr. Bullock's alkaloid; the others were made with samples furnished by Mr. Mitchell.

Experiment XXXVI. (V.)—A small cur.

TIME.	DOSE.	PULSE.	PRESSURE.	REMARKS.
0 m.	gr. 1½	184	146-152	The pneumogastri- cals had been cut some time previously. Hypodermically given. Pressure during struggles vi- brates between 70 and 105. Dog struggling some.
25 "	"	72	80-90	
30 "	"	80	65-95	
45 "	"	76	50-60	
60 "	"	68	38-60	

Experiment XXXVII. (V.)—A young mongrel.

TIME.	DOSE.	PULSE.	PRESSURE.	REMARKS.
0 m.	gr. 1	176	110-120	Par vagum already cut. Given hypodermically.
5 "		"	"	
20 "		164	110-115	During struggles pressure falls to 70 and rises to 105.
30 "		80	75-95	
40 "	"	76	65-85	Constant convulsive tremors very marked; when they are especially violent the pressure rises to 110.
60 "	"	70	65-95	

These experiments are sufficient to show that the reduction of the pulse produced by viridia is entirely independent of any action upon the cardiac inhibitory nerves. In order to determine whether large doses of the alkaloid paralyze the peripheral inhibitory cardiac nerves, further studies were required.

In two experiments, detailed below, the effect of galvanism upon the par vagum was therefore studied in a dog profoundly under the influence of the drug. An examination of the record of Experiment XXXVIII. will show that after the injection of a fifth of a grain of a very pure sample of the alkaloid into the veins, the cardiac inhibitory nerves were exceedingly sensitive to stimulus, and also that this sensitiveness was very slightly diminished by the further administration of nearly a grain and a half of the poison. In Experiment XXXIX. the amounts of the poison exhibited were very much less, but, as the animal was a very young pup, the effects of these doses were very marked,—arterial pressure falling to one-half its primitive height; yet the sensitiveness of the inhibitory apparatus was preserved intact. The first of the experiments seems to show that in enormous quantity the poison does slightly lessen the sensitiveness of the par vagum, but it is very possible

that the diminution of sensibility alluded to may have been due to exposure of the nerves or some other accidental cause; at any rate, the experiments show that if viridia, even when given in enormous doses, has any action upon the cardiac inhibitory apparatus, such action is so slight that it may be practically disregarded. The experiments are as follows:

Experiment XXXVIII.—A stout dog. Spine cut.

TIME.	DOSE.	PULSE.	REMARKS.
0 m.	gr. 1-20	160	Into femoral vein.
10 "	gr. 1-10	"	Into femoral vein.
16 "	"	100	"
17 "	gr. 1-20	"	Into a vein of the neck.
19½ "	"	92	"
20 "	"	110	"
21 "	"	"	One pneumogastric cut.
24 "	"	112	"
32 "	"	108	Dog lost considerable blood.
32½ "	"	"	Cut remaining pneumogastric.
33 "	"	116	"
38 "	"	116	A moderately strong current to par vagum caused immediate diastolic arrest.
42 "	gr. 1-10	"	Into jugular vein.
43 "	"	120	"
43½ "	gr. ½	"	Into jugular vein. Immediate convulsions confined to the anterior part of the body.
47½ "	gr. ¾	"	Into carotid artery.
49 "	"	116	"
51 "	"	116	Galvanic current of the same strength as be- fore has a very decided effect on the heart, but does not completely arrest its move- ments.

Experiment XXXIX.—A small young pup. Woorari used, and spine and par vagum cut.

TIME.	DOSE.	PRESSURE.	REMARKS.
0 m.	gr. 1-10	95-105	Into peritoneal cavity. A mild current applied to par vagum caused immediate diastolic arrest.
13 "	gr. ½	"	
24 "	"	40-45	

It having been determined that neither the slowing of the pulse-rate nor the diminution of the arterial pressure produced by viridia is dependent upon an action of the poison upon the cardiac inhibitory apparatus, the question logically presents itself, whether the first of these phenomena is due to an action upon the accelerator cardiac nerves, and the second to an influence upon the vaso-motor nerves, or whether both are the result of a direct influence upon the heart-muscle.

In order to determine whether the slowing of the pulse was independent of the accelerators of the heart, in the following experiment the attempt was made to divide the spine so high up as to paralyze these nerves, and in this way to eliminate their action from the problem. Unfortunately, at the post-mortem, care was not exercised to determine the exact point at which the spine was cut, and the single experiment is open to the objection that the supposed section of the accelerators was not anatomically proven to exist. As, however, the physiological result of such division was obtained, namely, a very slow pulse, such objection is perhaps more specious than valid. The experiment is as follows:

Experiment XL.—A terrier pup. Spine cut in lower cervical region. At the autopsy one lateral column found not to be completely crushed.

TIME.	DOSE.	PULSE.	REMARKS.
0 m.		96	Artificial respiration commenced.
3 "		82	
7 "	gr. 1/6		Into femoral vein.
23 "		80	
27 "		80	
34 "	gr. 1/3		Into peritoneal cavity.
35 "		68	
44 "		50	
46 "			Par vagum cut.
52 1/2 "		48	

The record of this experiment proves that the reduction of the pulse-rate by viridia is independent of the nerve-centres. As a matter of course, when the pulse is already slowed by division of the accelerators, the fall is not so great after exhibition of the alkaloid as in the uninjured animal. Yet, in spite of the division of the par vagum, the poison reduced the pulse to nearly one-half its original rate. The experiment does not, however, warrant the further deduction that the alkaloid has no action upon the accelerators, since it is evidently possible that an influence upon the nerves and upon the heart-muscle might be exerted simultaneously. The point must be left for future investigation; but I think the present light indicates that if viridia does act at all upon the accelerators, such action must be of minor importance.

The next point which logically offered itself for determination was whether the fall of the arterial pressure produced by jervia is due solely to an influence upon the vaso-motor nerves, or whether the poison lessens the working-power of the heart-muscle. In the following experiments a study was made of the effect of the drug upon the arterial pressure after paralysis of the vaso-motor nerves by section of the cord.

Experiment XLI.—A stout dog. Cord cut in the extreme upper dorsal region at 11.15 A.M.; observations commenced 11.25 A.M.; the jervia employed containing a good deal of resin.

TIME.	DOSE.	PULSE.	PRESSURE.	REMARKS.
0 m.			90-100	Artificial respiration commenced.
1 "			80-85	
4 "	gr. 1-20	160	75-85	Into femoral vein.
5 "		135	80-90	
7 "	gr. 1-20		80-90	Into femoral vein.
8 "		140	80-90	
9 "			75-80	
10 "		120	60-70	
11 "		120	50-55	
12 "			50-60	
14 "	gr. 1-10		60-65	Into femoral.
15 "			60-65	
17 "		120	65-70	
20 "		100	55-60	There appears to be a clot in the femoral vein interfering with passage of alkaloid into the circulation.
21 "	gr. 1-20			Into vein in neck.
21 1/2 "		108	45-50	
22 "		116	50-75	
22 1/2 "	gr. 1-10			Into jugular vein.
23 "			40-45	
23 1/2 "		92	45-50	

TIME.	DOSE.	PULSE.	PRESSURE.	REMARKS.
24 m.		110	40-50	Pneumogastrics cut a few minutes since. Dog has lost some blood.
39 "		116	30-35	
42 "		116	50-55	Into jugular.
46 "	gr. 1-10		50-55	
47 "		120	50-55	Into jugular.
47 1/2 "	gr. 1/2			
48 1/2 "			45-50	Into carotid.
51 1/2 "	gr. 3/4			
52 "			35-40	
53 "		116	35-40	
55 "		116	35-45	
61 "	gr. 1/2			Into jugular. Violent convulsions at once confined to the anterior part of the body.
63 "		120	30-35	Galvanization of spine caused a general convulsion of a mild type, with a rise of the blood-current to 70 or 80, the pulse instantly becoming exceedingly rapid. On withdrawing the poles, the mercury fell at once, in half a minute standing about 40,—the pulse being 208.
65 "		112	35-40	

Experiment XLII.—A terrier pup. Cord divided in lower cervical region. At the autopsy one lateral column found not to be completely mashed.

TIME.	DOSE.	PULSE.	PRESSURE.	REMARKS.
0 m.		96	100-135	Artificial respiration resorted to at end of first minute.
2 "			95-100	
3 "		82	100-105	
7 "	gr. 1/6		115-125	Into femoral vein.
9 "				Convulsions in anterior part of the animal.
30 "			55-75	Artificial respiration very active.
34 "	gr. 1/3			Into peritoneal cavity.
35 "		68	115-125	Convulsive rigors and tremblings in anterior part of body very marked, and, to some extent, in one-half of posterior portion.
44 "		72	115-120	
46 "				Par vagum cut.
52 "			75-85	Dog quiet.

These two experiments, in conjunction with what has been previously brought forward, certainly prove that jervia exerts a direct influence upon the cardiac muscle, lessening not only the rapidity but also the force of its pulsation.

In Experiment XLI. the pressure was reduced to a little more than a third of its primitive amount, and in Experiment XLII. a similar but less decided fall was seen. The temporary rise of the blood-pressure which occurred late in Experiment XLII. was undoubtedly due simply to the general muscular contractions.

In order to investigate still further, and determine more positively, the action of viridia upon the cardiac muscle, the following experiments were performed upon batrachians:

Experiment XLIII.—A rather large frog. The spine cut just below the head, and the heart laid bare. Two minute drops of a solution of jervia (three grains to the fluidrachm) were dropped upon the heart, which had been beating at the rate of eighty per minute. Instantly motion ceased, but in a few seconds re-commenced, and a minute afterwards the pulsations were sixty per minute. Shortly after this a little of the solution was injected into the heart, when movement ceased at once,

and only occurred again in the form of a few imperfect, distant pulsations. There was a not very well marked apical white spot, and the ventricles refused entirely to respond to mechanical stimuli. Movements of the mouth, apparently voluntary, continued some minutes after the cardiac arrest.

Experiment XLIV.—A moderate-sized frog. A few drops of the solution were thrown into the cardiac region. In a minute afterwards, voluntary motion not being markedly affected, the heart was exposed, and found to be beating twelve times a minute. About a half-minute after exposure, all spontaneous cardiac movements ceased, the heart continuing to respond to mechanical stimuli, and retaining this power for some minutes. Three minutes after the cardiac arrest, the frog made three rapid, successive, vigorous jumps.

Experiment XLV.—A frog of moderate size. About ten minims of the solution were injected into the pericardial space. Three-fourths of a minute, voluntary movements vigorous; one minute, spontaneous cardiac movements cease; two minutes, heart does not respond at all to mechanical stimulus; three minutes, feeble movements apparently voluntary; four minutes, frog sits up and opens his eyes widely, and when the balls are touched with a pencil the membranes respond, although somewhat sluggishly.

In the first of these experiments the effect of the direct application of the drug to the heart was very apparent. In the last two experiments the intention was, if possible, to paralyze the heart before the drug was carried freely into the general circulation. In this I was only partially successful, although voluntary movement persisted in a greater or less degree after complete arrest of the heart. Certainly, however, these experiments are confirmatory of those made upon warm-blooded animals, and show that viridia does act upon the heart itself.

Section C.—Action on the Vaso-Motor Nerves.

It is, of course, a matter of a good deal of interest and importance to determine whether viridia exerts an influence upon the vaso-motor nerves. It has already been shown that it lowers the arterial pressure by a direct action upon the heart; but this, of course, does not prove that it has no power over the blood-vessels, since it is very possible for the alkaloid to have a double action, affecting both the heart and the vaso-motor centres. It is evident, however, that the cardiac influence of the alkaloid must so mask any action upon the vaso-motor centres which it may exert as to render the proof of such action difficult.

In the following experiment the effect upon the blood-pressure of stimulating a sensitive nerve was taken advantage of to determine the point at issue:

Experiment XLVI.—A pup. Par vagum cut. Woorari administered so as to cause complete paralysis, and the dog kept alive by artificial respiration.

TIME.	DOSE.	PRESSURE.	REMARKS.
0	m.	95-115	A mild current applied to exposed femoral nerve.
½	"	160-170	Current broken.
4	gr. 1-10	95-105	Into femoral vein.
6	"	80-100	Current previously employed.
8	"	136	Maximum reached. Current broken.
16	"	40-50	

TIME.	DOSE.	PRESSURE.	REMARKS.
17	m.	gr. ⅓	Into peritoneal cavity.
19	"	35-45	
25	"	40-45	Current of strength previously used applied to a freshly dissected axillary nerve.
25¾	"	55-60	
26	"	40-45	Current broken.
29	"	20-25	Current applied to brachial nerve.
29½	"	30-35	Current broken.
30	"		
38	"		A mild current applied to pneumogastrics caused instantaneous diastolic arrest of the heart.
39	"	25-30	An intense current applied to a freshly dissected brachial nerve, on side opposite to that before used.
40	"	25-30	Current removed from brachial and applied to previously unused femoral.
41	"	25-30	Current broken.
43	"	25-30	Artificial respiration stopped.*
43¾	"	20-25	
43¾	"	15-20	
44¾	"	10-15	
45	"	9-12	Cardiometer removed.

Experiment XLVII.—A stout cur.

TIME.	DOSE.	PRESSURE.	REMARKS.
0	m.	85-90	Par vagum cut, and woorari, in small amount, given.
3½	"		Galvanism to femoral nerve caused some struggles.
4	"	100-140	Current broken.
6	gr. ¼	90-95	Injected into a vein; clot in latter so impeded progress that it is very doubtful whether any of the alkaloid got into the circulation.
13	"	90-103	
15	"	85-90	Galvanism as before.
15¾	"	110-140	Current broken.
18½	gr. ¼		Into vein; instantly struggles commenced, soon passing into violent convulsions, not preceded by any fall of the arterial pressure.
21½	"	160-165	Still convulsions. One-half grain of woorari.
26	"	75-80	Dog quiet.
28	"	65-70	
30	"		Violent convulsions, during which the mercury in the cardiometer rose and fell incessantly, reaching 185.
31	"	60	Dog quiet.
32¾	"	50-55	More woorari given.
34	"		Mild current to par vagum acted very decidedly on the heart.
46½	gr. 1		Instantly violent convulsions as before, not preceded by a fall of pressure.
46¾	"	145	
51	"	80	Dog quiet.
52	"	65	
60	"	55-60	Current applied to a fresh femoral nerve.
60½	"	85-90	
60¾	"	75-80	Current broken.
64	gr. ½		Injected.
76	"	40-50	
80	"	40-45	An intense current applied to a freshly exposed brachial nerve.
80¾	"	50	
81	"	50-55	
83	"	65	After this the mercury began to fall steadily, in spite of the continuous application of the current to the nerve.

In reviewing these experiments it will be found that in the first (*Experiment XLVI.*) a tenth of a grain was sufficient to affect decidedly the response of the circulation to the irritation of a sensitive nerve. The arterial pressure had only been lowered fifteen measures, yet a current applied as before the injection raised the column only to one hundred and thirty-five instead of one hundred and sixty. When a sixth of a grain more of the poison had

* This experiment compared with *Experiment XXVI.* shows the great difference between the action of the two alkaloids upon the heart, in that in viridia-poisoning an excess of carbonic acid in the blood is powerless to elevate the pressure in the arteries.

been exhibited, the rise produced by currents applied to the largest freshly-dissected nerves had scarcely any effect, and finally failed altogether, at a time, too, when the heart responded most readily to stimulation of the pneumogastriacs.*

In the second experiment, either because the drug used was less pure or the animal less susceptible, larger doses were required to effect the destruction of the reflex vaso-motor activity. It is, of course, possible that viridia paralyzes the afferent or sensitive nerves and thereby prevents the impulse being carried to the vaso-motor centre; but, as the animals show evident signs of pain when the nerve is irritated in viridia-poisoning, the two experiments seem to me to prove that viridia is a vaso-motor as well as a cardiac depressant.

In summing up the present study of viridia, the results obtained may be put in a very few words, as follows. Viridia in its action upon the circulation, as compared with its influence upon the respiration, is very much more powerful than veratroidia. The slowing of the pulse and the lowering of the arterial pressure caused by viridia are due to a direct action upon the cardiac muscles and upon the vaso-motor centres, upon both of which the alkaloid acts as a powerful depressant; upon the inhibitory and accelerator nerves of the heart, viridia acts not at all, or so slightly that its influence is not perceptible.

As has already been stated, Mr. Mitchell affirms that chemically there is no difference between viridia and the older alkaloid of veratrum album jervia. It is a matter of interest to test his conclusion physiologically, but, unfortunately, he has only been able to furnish me with sufficient of the veratrum album jervia to make a single experiment, as follows:

Experiment XLVIII.—Acetate of jervia from veratrum album in alcoholic solution. A stout cur; the cord cut in the upper dorsal region at 11.30 A.M. The first cardiometrical observation taken at 12 noon.

TIME.	DOSE.	PULSE.	PRESSURE.	REMARKS.
0 m.		186	65-75	
4 "			70-80	
5½ "	gr. ¼		80-90	Injected into femoral vein.
6½ "		150	70-80	
6¾ "			65-75	
7 "			60-70	
8 "			70-80	Dog trembling slightly.
9 "			70-85	
10 "	gr. 1-30	165	75-85	Into femoral vein.
10½ "			55-65	
11 "		93	35-45	
12 "		102	40-50	
15 "		105	45-55	
18 "		108	60-70	
19¼ "	gr. 1-30			Into femoral vein.
19½ "			50-55	
20 "		96	40-45	
21 "		99	45-50	
22 "				Pneumogastriacs cut.
22½ "		183	70-80	
23 "			60-68	
24 "		180		
25½ "	gr. 1-30		65-75	Into femoral vein.
26½ "		150	57-70	
32 "		126	60-70	

* I am very doubtful, however, whether a dose was not given about the twenty-seventh minute in Experiment XLVI. and omitted by mistake from the record.

TIME.	DOSE.	PULSE.	PRESSURE.	REMARKS.
34½ m.	gr. 1-15			Into femoral vein.
37 "		150	50-55	
40 "		150	50-55	A slight flow of saliva; it is possibly due to heat and to gag.
42½ "			50-60	
43 "	gr. 2-15			Into femoral vein.
44 "				A struggle; doubtful how much voluntary; it may be convulsive. Commenced in upper part of body and there confined, before the blood-pressure was affected by injection.
45 "		144	35-40	
46 "		126	45-50	
48 "		156 very irregular	30-35	Gaivanization of par vagum caused instant arrest of heart.
51 "	gr. 2-15			
53 "				A clot is in veins, and it is doubtful as to how much of remedy penetrated.
60 "	gr. ¼			Into opposite femoral.
61 "			15-20	Cannot count pulsations. Finger inserted through an opening in chest and brought into contact showed a pulse of 165.
62 "	gr. ½			Galvanization of pneumogastriacs arrests heart.
63 "		210		Counted as before.
70 "	gr. ¼			Injected directly into heart.
75 "	gr. ½			Injected into a large vein in neck.
78 "		64		Motions of heart very weak to finger.
80 "				Cardiac pulsations ceased. Heart does not respond at all to strongest currents. The intestines in active motion, and respond well. Voluntary muscles respond well. The dog has not had violent convulsions at any time. During last half-hour has been perfectly quiet.

At the time this experiment was made, I thought more of the veratrum album jervia would be forthcoming, or otherwise the character of the experiment would have been different. In examining the record it will be seen that the drug produced a steady fall of the arterial pressure and lowering of the pulse-rate up to the time when the pneumogastriacs were cut, whereby the pulse was greatly accelerated. After the division of the inhibitory nerves the continuous exhibition of large doses failed to affect the pulse, although the pressure fell very decidedly, even, at last, to zero. When the arterial pressure was almost at a minimum, the pneumogastriacs were still sensitive to galvanic currents. Finally the heart was arrested, and its muscle was unable to respond to the strongest stimuli. As the reduction of the arterial pressure occurred after division of the spine, *i.e.*, paralysis of the vaso-motor system, it obviously was the result of a direct action upon the cardiac muscle. Making the obvious deductions from these facts, the above experiment would seem to indicate that jervia of veratrum album acts first as a stimulant to the cardiac inhibitory nerves, slowing the pulse through them, and that after their section it reduces the force but not the number of the cardiac pulsations.

If this be so, the alkaloids of V. album and V. viride are not the same, and Mr. Bullock is right. The conclusion cannot, however, be accepted as proven, since with the jervia was injected a quantity of alcohol, and it is possible that after section of the pneumogastriacs this alcohol may have increased the rate of

the cardiac pulsations. On the other hand, the convulsions caused by the true jervia were not nearly so violent as those ordinarily seen with viridia. So that, whilst confirmation is needed before any positive opinion can be reached, the evidence thus far points to the distinctness of the two alkaloids.

PART III.—GENERAL CONSIDERATIONS.

Having an intimate knowledge of the action upon the circulation of the only two active principles of *veratrum viride*, it would seem an easy task to determine the effect of the drug. Unfortunately, however, the exact proportion in which the alkaloids exist in the root is not known. Mr. Bullock obtained the viridia much more abundantly than the veratroidia, but Mr. Mitchell found the former alkaloid the least plentiful. Neither of these investigators claims that he obtained more than a portion of the active principles in the roots which he worked with, so that the question as to which alkaloid is most abundant seems doubly unsolved. It appears to me probable that the viridia is the more abundant, because in *veratrum viride* poisoning the circulation is affected so very much more intensely than the respiration.

Be these things as they may, it is plain that in those actions in which the two alkaloids agree, the crude drug will have most power, and, *vice versa*, if in any influences the two alkaloids are antagonistic, in such influences the *veratrum viride* will be least powerful. In what points, then, do the two alkaloids agree? Evidently in two,—namely, their depressing influence upon the force of the cardiac muscle, and upon the vaso-motor nerves.

Veratroidia lowers the pulse-rate by its action upon the inhibitory centres; viridia lowers the pulse-rate by benumbing, as it were, the muscle. These actions are not the same; it is even conceivable that they may to some degree be antagonistic, or, in other words, that a benumbed heart-muscle may not respond as quickly as normal to an inhibitory impulse. Any one who has used *veratrum viride* habitually must have noticed, more or less frequently, good effect produced by it before the pulse-rate was materially diminished. This, it seems to me, is explained by the above considerations, the arterial pressure being affected before the pulse-rate.

Although it might seem fitting to discuss the clinical uses of *veratrum viride* at length, yet I will refrain from so doing, for several reasons. In the first place, there is very little that is actually new to be said; in the second place, my own opinions have been sufficiently expressed elsewhere; in the third place, any doctor knowing the physiological action of this drug ought to be able to apply such knowledge to the treatment of disease. The practical value of the present study is in rendering clear and definite the clinical employment of the drug rather than in opening any new uses for it. It has been over and over again distinctly stated that the action of *veratrum viride* is that of a pure depressant. Yet its use in various *asthenic* diseases is still from time to time recommended in the journals. It hardly seems

necessary to stigmatize such practice as irrational and harmful. To weaken still further an already weak and struggling heart because the pulse-rate is high is simply murderous.

Before closing this article, I desire to call attention to the great similarity between many of the effects of *veratrum viride* and of depletion. If one-third of the circulatory fluid is withdrawn by bleeding, of course the inflamed part is more or less starved. *Veratrum viride* really withdraws the circulating fluid from the inflamed part almost as directly as does venesection. The capillaries of the inflamed tissue are distended, and the blood rushes to and accumulates in the part largely because the capillaries are thus distended. Under the influence of the *veratrum* the general rapidity of the blood-current is lessened, and of course the inflamed tissue feels this in its blood-supply; but, more than this, all the capillaries of the body are enlarged, and, claiming their share of the vital fluid, withdraw it from the inflamed part. If the average increase of the vessels should amount to one-third their original calibre, an effect in some degree similar to that produced by the removal through a vein of one-third of the blood ought to be obtained for the time being.

The extraordinary value of the drug in many sthenic conditions probably no one who has used it with cautious boldness will deny, and with our present light the *rationale* of its action seems very clear.

CASES CURED BY ELECTRICITY.

BY HUGO ENGEL, M.D.

Incomplete paralysis of both legs—Pes valgo-equinus—Lateral curvature of the spine.

IN October, 1873, I was called to see a lady. While attending her, my attention was called to her little daughter Mary, three years old. The child was creeping on the floor, and looked emaciated, or, rather, her face had that expression so often found in hunchbacked persons. The mother could give no history, except that the child had lost power suddenly ten months before.

The legs of the child were emaciated, the left more than the right, and the muscles of the back on the left side were less fully developed than those on the right side. The left foot was a beginning *pes valgo-equinus*. The seventh dorsal vertebra seemed to be painful, and when I tried to make the child stand on its feet there was at the same place a slight lateral curvature of the spine towards the right side.

A physician, when applying electricity in children, especially if he desires to establish a diagnosis with its aid, should be careful not to let the child see either the apparatus or the electrodes to be employed, and to make use of tepid water. When children once commence crying upon such an occasion they seldom cease, and any diagnosis in regard to electro-sensibility is impossible. The touch with a cold electrode will prevent the detection of a sensitive point.

I used a constant current of fourteen cells along the spinal cord, leaving the positive pole at the cervical region. I moved with the negative from vertebra to vertebra down to the sacrum. When I reached the sixth and seventh dorsal vertebræ, the child moved and screamed: here was the painful spot. I then ap-

plied the faradic current, with a dry electrode brush, left the positive (common) electrode on the cervical portion of the spine, and moved the negative (armed with the brush) all over the skin, with the following results:

The electro-sensibility was very much impaired all over on the left, and not at all on the right side of the back; the same disturbance of sensibility on the legs, but here it was disturbed, too, on the right one, only less than on the other; and normal electro-sensibility on the arms, face, and front of chest. I now wetted the common electrodes of the faradic current, for the purpose of trying the electro-muscular contractility. Every muscle contracted, but those on the right side more than those on the left, and the left tibialis anticus not at all. I now used a very strong galvanic current* (twenty-eight cells), and placed the two electrodes on the course of the ramus profundus nervi peronei sinistri. After a few moments the child seemed to suffer pain. Slight movements of the foot set in now when I interrupted the current, a sign that the tibialis anticus, the paralysis of which was the cause of the pes valgo-equinus, was not totally unamenable to treatment. When I now applied a strong faradic current over the muscle mentioned, the muscle contracted, and the foot assumed a normal position as long as the contraction of the tibialis anticus produced by the current counteracted the action of the peronei muscles.

As the electro-muscular contractility was nowhere lost, I gave a favorable prognosis, and commenced the treatment at once. I told the father of the child to put up in a room an enclosure similar to a large box with the top and bottom boards taken out, to make the sides of the enclosure perfectly smooth, and to place the child with its playthings within the enclosure, and under no circumstances to allow the child to walk until it should climb with its hands to the boards and commence to stand and to walk by itself.

This was October 21, 1873. I had the child brought to my office every day, and made use of the following treatment:

At first I applied the current of the constant battery (ten cells) over the spinal column. I placed the anode on the second dorsal vertebra and the cathode on the painful spot for ten minutes; then I used a current of twelve cells, and removed the cathode to the last lumbar vertebra, sometimes a little lower, to the sacrum, and towards the hip-joints for about two minutes.

I may as well state here that in about three weeks I had been obliged to decrease slowly the strength to six cells, the normal sensibility having been restored. I had to decrease in the same way the strength of the secondary induction current.

The latter was always had recourse to immediately after the action of the galvanic current, in the same séance. I faradized all the muscles of both legs and the muscles of the back on the left side. This procedure occupied about fifteen minutes. When I reached the left tibialis anticus I always sent at first a constant current over the region of the ramus profundus nervi peronei for about a minute, and then continued faradization as above mentioned.

The child was under this treatment for three weeks. November 12, 1873, the following amelioration had taken place. The surface-temperature all over the before-affected and in-temperature-lowered parts was normal. The child could walk a few steps alone, very timidly as yet, but without help; there was no curvature of the spine, and the left foot was but slightly abducted. The electro-sensibility of the parts had been

restored to the normal status, and the electro-muscular contractility of all the muscles was again a normal one, except that of the left tibialis anticus, which always required a stronger faradic current to produce the same contractions as its electrically stimulated confrater on the other leg. All the muscles had considerably increased in size.

I now had the child brought to me every second day, and, after two weeks more, twice a week. Once a week I applied the different currents as in the beginning of the treatment, only decreasing the strength of the currents; at the other sances I simply faradized the left tibialis anticus, and with such a good result that on Christmas eve following I discharged the child cured, and permanently so, as I had the pleasure of convincing myself a few days ago. During the last two weeks I had prescribed ol. morrhue and elix. cinchon. ferrat.

This case has, besides its result, some interesting points, which it may be worth while to mention here as useful hints in the application of electricity.

1. The case was one of spinal origin. There never had been any symptoms of brain-affection; the child was intelligent, and the muscles of the face were not affected.

2. There had been evidently in the beginning inflammation of the meninges at the seat of pain, with following exudation, extending farther down, and more on the left than on the right side.

3. The motor and sensitive nerves on the left side of the back especially suffered in consequence of pressure; therefore there were anæsthesia of the skin on the left side and paralysis of the muscles of the same side, and the muscles on the right drew the spinal column laterally to their side. When those of the left side were in their normal condition again, the curvature of the spine ceased. The same phenomenon took place with the pes equinus, which had a similar origin, the tibialis anticus being paralyzed, and the antagonistic muscles acting alone abducted and turned the foot outwards. As soon as this paralysis was overcome, the foot regained its normal position.

4. The galvanic current had a catalytic (electrolytic) effect on the exudations of the spinal cord, and a conduction-exciting influence on the motor nerves of totally paralyzed and perhaps degenerated muscles.

5. The faradic current improved the nourishment of the paralyzed muscles, which could regenerate their fibres.

CASE OF SUPPOSED OPIUM-POISONING. —USE OF ATROPIA.

BY J. S. RAMSEY, M.D.

WILLIAM G., aged 48; occupation machinist; unmarried. Has been strictly temperate until within about a year, since which time has been addicted to the occasional immoderate use of strong drink. Has rarely extended his "sprees" beyond a period of five or six days, then ceasing the use of liquor for a varied time ranging from one to four months.

On Monday, August 3, 1874, about 10.30 P.M., I was called to see the above-named in consultation with Dr. B. F. Witmer, formerly of Millersburg, Pa., and obtained the following history of the case. Patient had been on a continuous spree since the previous Monday; at no

* Several inquiries having been made, I will here mention that by "constant" or "galvanic" current I mean the current generated by the large constant battery manufactured by Otto Flemming, No. 13 North Ninth Street, Philadelphia. The cells thereof are stronger than Daniel's elements, in the proportion of about Flemming two and a half, Daniel four.

time worse than in an exhilarating state of inebriety. He had not been drinking more than usual on the day I first saw him, but had returned to his boarding-house and lain down and slept during the afternoon, arising well sobered about 5 P.M. He shortly after went out, and in about an hour was found by friends in a saloon (of indifferent character), in a condition which rendered it necessary that he should be assisted to his home. Here he was allowed to lie on a lounge and sleep. In this way he remained until shortly after 10 P.M., when it was noticed that he was breathing peculiarly, and that his face was of a bluish purple.

On examination, we found him wholly unconscious; pupils firmly contracted to the size of a pin's head; respiration varied, at no time more than three, and on several carefully-noted times only one a minute. Pulse 120; breathing stertorous and puffy; all sensation was absent, and respiration was unaltered on the application of handkerchief well saturated with spirits amm. arom. We attempted to administer remedies by mouth, but failed, he being unable to swallow. After many fruitless attempts to rouse him, as a final resort we administered hypodermically one-thirtieth grain of atropiæ sulph., and, immediately following it, an injection per rectum of spts. amm. arom., $\frac{3}{4}$ ss in a pint and a half of strong soap-suds. In less than half an hour after injections, the *respiration increased to fifteen per minute*, and the pupil dilated to the natural size; at the same time the patient became semi-conscious, and on the following morning he was so far recovered as to be able to go on his usual way.

The question naturally arises, Was the case one of opium- or of alcoholic poisoning? Mr. G. since informs me that the only thing he drank was one glass of ale. The history of the case, with the subsequent result, certainly points most strongly to the former, especially as he is known to have lost quite a large sum of money at the time.

An important point to be noted is the rapid increase in the respiration, and subsequent recovery, after the injection hypodermically and per rectum.

TRANSLATIONS.

THE TREATMENT OF SNAKE-BITES BY HYPODERMIC INJECTIONS OF AMMONIA (Dr. Kleinschmidt: *Berliner Klin. Wochenschrift*, No. 24, 1874).—On the morning of the 24th of July, Dr. Kleinschmidt was called to a boy aged 9 years, who, while plucking berries during the previous day, had been bitten by an adder. Upon his arrival, he found the patient sitting up in bed, with a fixed gaze, and with his countenance covered with cold sweat. The entire right upper extremity was greatly swollen, the skin being tightly distended and of a bluish color, and upon the least movement the boy uttered loud shrieks. The circumferences of the arm and fore-arm of the right side were found to be thirty and thirty-two centimetres respectively; the measurements taken at corresponding points upon the left limb being sixteen and fifteen centimetres.

The swelling upon the right side extended beyond the arm and over the right breast and side, and upon these localities there was also noticed an eruption, somewhat similar to that of nettle-rash; the axillary glands of this side were also involved. The position of the bite could not be seen, but the bystanders said that it was upon the middle finger, upon which, as well as upon the dorsal surface of the hand, several bullæ

were to be seen. Under these circumstances, there could be no indication for cutting out the wound, nor for cauterizing it, and since, in a case of adder-bite which had been treated but a few days before, but in which the symptoms were much less threatening, leeches had seemed to be of service, they were ordered to be used. The child also took, by the mouth, solution of caustic ammonia and small pieces of ice to counteract the tendency to vomit which was present, and, as the bowels were constipated, a laxative was administered.

When the patient was seen the next day, it was found that he had passed a restless night, and that his condition had become more serious. The swelling of the wounded limb was more marked; the circumference of the arm being thirty-two, that of the fore-arm thirty-four centimetres. The entire right side was more swollen, and the scrotum, which on the previous day was free, was now also involved. The features of the patient presented an indescribable expression of anxiety; the pulse was small and quick, beating 120, and the temperature was 39.9° C. If the swollen part of the body was touched, the boy gave utterance to still louder screams than upon the preceding day. A renewed application of leeches was ordered, and the amount of the solution of caustic ammonia to be taken was increased. Dr. Kleinschmidt then returned to his house, and, while reading a medical journal, met with an article upon the treatment of snake-bites by means of the hypodermic use of caustic ammonia. He at once seized his hypodermic syringe and hastened to the patient, and, having filled the instrument with a solution of caustic ammonia, he injected the entire quantity beneath the skin of the axilla. After the expiration of half an hour, under the constant application of cold compresses, the pain seemed to be somewhat less, and about the wound made by the syringe was noticed a bluish tinge. In the evening of the same day the child had ceased to vomit, the expression of anxiety upon the features was not so marked, and no increase in the amount of swelling had taken place. On account of the intense pain which was still present in the swollen arm, small punctures were made in the skin, and through them a greenish-yellow fluid slowly discharged itself.

The next morning the boy was comfortable, and, upon measurement, it was found that the injured arm had decreased in size. Much fluid had come away during the night, and the patient had slept much more quietly than had previously been the case since his accident. At the point of entrance of the syringe a large black slough had formed, but no pain at this point was complained of. The pain in the arm was much more moderate, and was present only in response to severe pressure. A marked improvement was noticed in the general condition of the child, the vomiting had ceased, and the appetite was good. During the next eight days the swelling of the limb gradually diminished, until it became of about the normal size, the bluish-green color of the skin yielded to a greenish yellow, and the child could again use the limb freely.

Dr. Kleinschmidt concludes that, although (since but four per cent. of persons bitten by snakes of this kind die) it cannot be said that this boy would not have recovered under a purely expectant treatment, still, the solution of caustic ammonia must be considered as the most efficacious antidote against the poison of serpents, and the one, too, which is the most speedy in its action. He will be inclined in the future to use this treatment, not only in cases of dissecting-wounds and of hydrophobia, but also in malignant pustule and glanders, in which diseases we are all so much at a loss for a remedy that shall be certain in its effects.

W. A.

PRIMARY INFECTIOUS INFLAMMATION OF BONES AND OF THEIR MARROW.—Under the above title Lücke (*Deutsche Zeitschrift f. Chirurgie*, iv., 1874, pp. 218–245) describes a disease which is very variously named by authors, but which perhaps is best known by the name of spontaneous osteomyelitis. Lücke regards the disease as one due to infection which takes its start from the marrow or periosteum, which has hitherto been intact. It is possible for the disease to remain limited to the locality at which it originates, but it is quite common to meet with secondary deposits before suppuration has been established at the point originally involved. The disease occurs only in youth up to the time that the growth of bone is complete. Its occurrence appears to be favored by damp, cold weather, and it is consequently most frequently met with in the spring and autumn; but from this it must not be inferred that it is not liable to be met with during the other seasons. Heretofore, the affection has been thought to be caused by the influence of cold exclusively, and Roser on this account speaks of a pseudo-rheumatic inflammation of the joints and bones. Lücke has, however, in a series of cases been able to establish the fact that an injury has served to start the disease into action, and he infers that both these causes are concerned in leading to the local disturbances of circulation whence the affection is developed. Consequent upon the injury is a period of incubation of two or three days, then after a chill an intense fever sets in, which speedily becomes typhoid in its character. The formation of a differential diagnosis between this affection and typhus is sometimes difficult, but it can generally be made by noting the existence of the local trouble early in the attack. The presence, however, of this local inflammation may cause the disease to be looked upon as acute articular rheumatism. Catarrh of the lungs sometimes sets in early in the disease, and may be quite evanescent, or, on the other hand, may speedily lead to a fatal issue. The cause of this occurrence is to be sought in a fatty embolism of the lungs, as was established in two cases by post-mortem examinations; and Lücke believes that the process originates in a solution of the fat-cells of the marrow, and the entrance of free fat into the veins. The local symptoms begin with the chill, which at the most has been preceded by but slightly painful sensations, which from this time become rapidly more severe. The starting-point of the affection is either in the periosteum or the marrow, but the second of these tissues is usually involved in the process. The long bones are the most apt to be affected, and these most frequently at their lower extremities, while the involvement of the spongy bones is more rare. It usually results in suppuration with necrosis of a greater or less extent, and if the epiphysis is the part attacked its separation is a usual occurrence. The neighboring joint of course is commonly involved, and this can take place even when the disease is seated at some distance from the articulation. It is possible that the disease may be confined to the primary deposit, and run a favorable course; but usually, even before suppuration at the starting-point occurs, secondary deposits are found in other bones, in some of the soft parts, or, worst of all, in the internal organs. These secondary deposits may also be preceded by chills, and then some of the appearances of pyæmia are presented. Lücke is inclined to look upon the whole process as pyæmic, especially since he has succeeded in finding micrococcus in the marrow at a time when there had been no communication with the outer air; and from this analogy with pyæmia, he thinks himself justified in regarding the process as one of infection. W. A.

NEW METHOD OF LIGATING THE PRIMITIVE CAROTID ARTERY (*Bulletin de la Soc. Méd. de la Suisse*—

lande, 1873, No. 11).—In a paper read before the Medical Society of Southern Switzerland, Dr. Rouge, of Lausanne, proposes the following new method of ligating the primitive carotid artery, a method which is as feasible for ordinary cases as the one usually employed, and is claimed to be much less dangerous and more easy of execution than the operation of Sédillot, in which the ligature is applied to the inferior half of the vessel between the origins of the sterno-cleido-mastoid muscle. In numerous cases he thinks that this method is the only one that can be recommended. As yet, indeed, no opportunity has occurred of testing the operation upon the living, but Dr. Rouge has performed it many times upon the cadaver, and always with the same result. The head being strongly extended, and at the same time turned towards the opposite side, an incision is to be made, usually about opposite to the thyroid cartilage, along the posterior edge of the sterno-mastoid muscle, which, owing to the position of the head, is strongly prominent. The vessel can then be reached without trouble by working forwards and inwards along the inner surface of the muscle; no annoyance is experienced from the jugular vein, which goes to the front without any special effort on the part of the operator, and the artery can be readily isolated and secured by the ligature. The introducer of this method thinks that it should always be employed when tumors situated in the anterior cervical region present serious difficulties in the performance of the usual operation. This is apt to be the case when these tumors are of strumous origin (and tumors of this class are extremely frequent in Switzerland), and here, too, the carotid artery is found out of its usual place, being thrust backward to a greater or less degree. Dr. Rouge claims also that his method has the advantage of permitting the application of the ligature at various distances below the bifurcation of the artery, and at the same time the drainage of the wound is facilitated by its situation. As a final advantage, it may be urged that the cicatrix left by the wound of incision would lie more to the side and back of the neck than usual, and by the projection of the sterno-cleido-mastoid muscle would be less strikingly visible. W. A.

IGNIPUNCTURE (G. Juillard: *Centralblatt für Chir.*).—Some time ago, Richet advised a mode of treatment for chronic affections of the bones and joints, to which the name of ignipuncture was given. This mode of treatment was carried out by punctures into the affected parts, made with a glowing needle. The instrument used by the originator of the treatment, Richet, was a needle of platinum, four or five centimetres in length, which was attached to a ball for the purpose of retaining heat. Juillard had made for the same purpose a very narrow-pointed loop of platinum wire, which he heated as in other galvano-caustic operations, and which he found much lighter and much more easily manipulated than the needle which was previously used. The operation is performed by introducing the glowing needle into the tissues to a sufficient depth to penetrate into the affected joint or into the diseased bone, and then by at once withdrawing it. This operation is to be repeated many times if it is found to be necessary. The pain attending it is not very intense, an anæsthetic not being always needed. After the operation, the limb is to be kept at rest, and cold compresses are to be applied over the part. If there was any exudation either of a serous or purulent character present in the joint at the time the needle was introduced, it made its exit through the opening; but it usually ceases to flow at the expiration of ten or twelve hours, and only in exceptional cases was the operation followed by a fistula. The perforations usually healed by first intention, and when they were followed by fistulæ it was because the needles

were left in the tissues for too long a time. Ignipuncture is usually followed by a marked diminution of pain and fever, and there is no inflammatory reaction consequent upon it.

The results of this operation are reported to be very encouraging. The cure of affections of the joints usually results in ankylosis, but sometimes motion is preserved. Favorable results can be looked for with more confidence when the affection is an arthritis of a purely purulent or fungous form, but it is often necessary to repeat the introduction of the needle four or five times. Even when a complete cure is not attained, some improvement often follows, and in no case are there any ill results.

W. A.

THE ACTION OF MONO-BROMIDE OF CAMPHOR.—M. Bourneville gives (*Le Progrès Médical*) a series of experiments performed by himself on various animals, to whom he administered various doses of this substance, with a view to ascertain its physiological action. His conclusions are as follows. Bromide of camphor diminishes the number of pulsations of the heart, and determines a contraction of the auricular vessels (guinea-pigs and cats). It diminishes the number of inspirations. It lowers the temperature uniformly in fatal cases. This lowering goes on to a greater and greater degree, to the end. In cases which recover, this period of lowering is succeeded by one of elevation of temperature, which returns to the original point, but in a longer time than that during which the abatement has operated.

Bromide of camphor possesses incontestable hypnotic qualities. Toleration is not established with this medicine, and its use gives rise, at least with guinea-pigs, to a rapid, progressive emaciation.

THERAPEUTIC NOTES.

HYDRASTIN IN GONORRHOEA.—As far as internal treatment is concerned, I merely give in the first stage a saline aperient, to be continued three times daily for four or five days, together with the following injection: hydrastin, one drachm; solution of morphia (Magen-die's), two drachms; acacia mucilage to four ounces: to be used three times daily. This I have employed when inflammation ran very high, without even the slightest ill effects, and have used it in every stage of gonorrhœa with the most beneficial results when every other treatment, both internally and locally, had failed, including red sandal oil. But there is one remark I wish to make regarding the use of injections which medical men generally forget, and that is, to tell their patients to micturate previous to its use. Unless this is done, injections in gonorrhœa are useless. Hydrastin is used very much in different parts of the United States, and very successfully. My last patient was a farmer, who had had a gleet discharge for seven months. His medical man had quite wearied him out with injections, etc., all to no purpose. I at once tried the hydrastin, and in two weeks he was quite well.—*J. N. Bredin, L.R.C.S.I., etc., in London Lancet.*

TO CHECK VOMITING FROM COUGH.—Consumptives and others suffering from paroxysms of cough frequently vomit their food in such paroxysms. Dr. Woiliez recommends swabbing the pharynx, before eating, with a concentrated solution of bromide of potassium,—

R Pot. brom., ʒij;
Aquæ destil., ʒiv,

—warning the patient not to cough for a few minutes

after the application. The same treatment is recommended for the vomiting of pregnancy. It is said to be very successful.—*Missouri Clinical Record*, August, 1874.

TONIC IN ANÆMIA WITH CONSTIPATION.—

R Ferri sulph., gr. xlviii;
Magnesii calcinat., ʒi;
Tinct. quassiae, fʒii;
Aq. menth. pip., fʒvi.—M.

Sig.—Tablespoonful in water, three or four times a day.

IN LEUCORRHOEA.—

R Cantharidis, gr. iii;
Camphoræ, gr. xvi;
Ext. hyoscyami, gr. x.—M.

Ft. in pil. no. x.

One to two may be taken daily, in cases of nervousness accompanied by leucorrhœic discharge.

CONSTIPATION.—

R Hydrarg. protochld., gr. iii;
Pulv. rhei,
Pulv. jalap., āā gr. iss.

Div. in chart. no. x.

Sig.—One every two hours, until the desired effect is produced.

TOPICAL APPLICATION IN TOOTHACHE.—

R Chloroformi,
Vini opii, āā fʒss;
Sp. menth. pip., fʒvii.—M.

Soak a piece of cotton in the mixture and place it in the painful tooth, placing another piece outside of the tooth on the gum, and a third on the jaw over the root of the tooth.

ABSORBENT POWDER.—

R Magnesii calcinat., ʒss;
Sodii bicarb., ʒi;
Cretæ præparat., ʒi, gr. xv;
Pulv. sacch. alb., ʒiiss.

M.—Div. in chart. no. x. One to be taken half an hour before meals in acid dyspepsia.

ANTISPASMODIC PILLS.—

R Pulv. assafoetidæ,
Pulv. camphoræ, āā ʒvi;
Ext. belladonnæ, ʒii;
Pulv. opii, ʒi;
Syrupi, q. s.—M.

Ft. in pil. no. clxxx.

One to be taken the first day, two the second, etc., until six are taken daily or two or three times a day. Useful in hysterical and spasmodic nervous affections, in connection with bromide of potassium in doses of ten to fifteen grains.

IN HYSTERIA.—

R Chloride of gold and sodium, grs. iv;
Gum arabic, ʒi;
Sugar, q. s.—M.

Divide into forty pills, of which one may be taken three or more times a day.

SUBCUTANEOUS INJECTIONS OF APOMORPHINE.—M. Garville recommends the hypodermic use of apomorphine as an emetic. In cases of poisoning where it is impossible to administer medicine by the mouth, this remedy may prove of the highest value. An injection of one-sixth of a grain in one scruple of water will produce copious emesis within five minutes.

. PHILADELPHIA

MEDICAL TIMES.

A WEEKLY JOURNAL OF

MEDICAL AND SURGICAL SCIENCE.

The Philadelphia Medical Times is an independent journal, devoted to no ends or interests whatever but those common to all who cultivate the science of medicine. Its columns are open to all those who wish to express their views on any subject coming within its legitimate sphere.

We invite contributions, reports of cases, notes and queries, medical news, and whatever may tend to increase the value of our pages.

All communications must bear the name of the sender (whether the name is to be published or not), and should be addressed to Editor Philadelphia Medical Times, care of the Publishers.

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SATURDAY, SEPTEMBER 12, 1874.

EDITORIAL.

AID FOR THE DESERVING.

WE hear it rumored that the managers of the Homœopathic Hospital in this city intend to appeal to the citizens for pecuniary aid. If we mistake not, the institution has already tasted the sweet sustenance that flows from the legislative fountains of our good mother the State of Pennsylvania. To aid in the good work of raising money for a deserving charity is always pleasant and profitable, and we propose to-day to give a few facts concerning this hospital, so that our readers may be able to say a word or two for it whenever opportunity offers. We do this the more willingly because, if reporters are to be at all believed, the hospital is especially under the patronage of our worthy Mayor.

On the 26th of last May a young girl named Lizzie Tamplin was shot, and taken to the Homœopathic Hospital. In the course of a few days afterwards she died, and, a certificate of death from hemorrhage of the lungs having been given by the physician of the Homœopathic Hospital, her funeral was announced. Coroner Brown happened to see this announcement in the *Ledger*, and, about an hour before the time appointed for the burial, entered the house, and actually took the body out of the coffin, surrounded by the relatives. At the autopsy, a bullet was found in the brain; the hole in the skull had been filled with lime, and a piece of flesh-colored plaster placed outside, so as to con-

ceal it. We believe this case is to go to the courts, and hope our worthy neighbors will have justice done them.

A few weeks since, a policeman found, near Twentieth and Market Streets, a man named James Culliman, suffering from a frightful lacerated compound comminuted fracture of the thigh, and other injuries, the results of a fall out of a fourth-story window. The order of the Mayor being to take "accidents" to the Homœopathic Hospital, the injured man was conveyed there, about three o'clock A.M. During the whole of Sunday he was left in the hospital without any measure of relief being adopted until about ten o'clock in the evening, when, without a consultation of surgeons, the limb was amputated by a person not connected with the hospital; the patient dying about one o'clock the same night. It does not seem very remarkable that the Coroner's jury brought in a verdict that—

"The said James Culliman came to his death, August 17, 1874, from the combined effect of shocks received by a fall at No. 1917 Market Street, August 16, 1874, and from the amputation of his limb performed at the Homœopathic Hospital. *In the opinion of the jury, the delay of the physicians in charge of the hospital in their application of medical treatment to the deceased is in the highest degree censurable.*"

Lieutenant Wilkins of the police visited Culliman at the hospital during Sunday. He states that he was told by the doctor in charge "that he could not treat this and other cases until the visiting surgeon was consulted. I said, 'Then the man must lie here and die.' He said, 'No; in case of actual necessity I could call somebody in to do it.' We then talked about the case, and he said that the man was as easy as he could be under the circumstances, and he had no fear of his life."

In these cases, sufficient legal inquiry has been made to render the facts indisputable.

The following is given by a reporter for *The Sunday Press*:

"On the night of May 2, 1873, James Campbell, an elderly man, was hit on the head with an axe, in a quarrel with his son-in-law, at his house in a court running off Race Street above Fifteenth Street. Campbell was by the police taken to the Homœopathic Hospital, and the news telegraphed to the Central Station. A dozen reporters, hungry for a murder, after getting down to all the facts of the assault, visited the hospital in order to ascertain what immediate danger there was of the man dying that night and thus giving them a sensation for the morrow. The writer of this article was one of the anxious craft of that night. He visited the Homœopathic Hospital, and interviewed the doctor in charge. 'The man will die before morning,' said

the doctor; 'I can do nothing for him, and it would be only uselessly cruel to attempt by even dressing his wounds to save him.'

"Within one week, James Campbell escaped from this hospital alive. His smashed skull was simply a glancing scalp-wound."

At the trial of Sergeant Rogers of the police for killing Tweedy, it was a matter of evidence that the latter lay two days at the Homœopathic Hospital before his wounds were dressed.

When through the cracks so much light shines, one can well conceive how brilliant the illumination would be if the view were unobstructed. Will not, then, our readers do what they can to aid this impecunious and most deserving charity? Probably the Mayor would gladly receive donations.

CORRESPONDENCE.

THE BRITISH MEDICAL ASSOCIATION, FORTY-SECOND ANNUAL MEETING.

NORWICH, ENGLAND, }
Thursday, Aug. 13, 1874. }

DEAR SIR,—The British Medical Association meets for the second time in the ancient city of Norwich, the first session having been held twenty-eight years ago. Norwich may be called the metropolis of the east of England, and was in the seventeenth century, as Macaulay writes of it, "the chief seat of manufactures of the realm." But the star of progress which ever leads westward has left in favor of the great manufacturing centres far away from it. Although still prominent in a few special lines of industry, it is now mostly known by its traditions and by its grand old remains of the past. Norwich strikes the traveller, particularly if he be an American and fresh from the newness, baldness, and bareness of our neoplastic development, as singularly quaint and ancient; and it is the type of the few remaining cities of England that retain their original architectural characteristics not destroyed before the march of modern improvement or crumbled by the eroding hand of time. The labyrinthine interlacement of narrow and tortuous streets, which are almost without sidewalks, the number of ancient cathedrals and churches with belfries chiming the echoes of centuries ago, the overhanging walls of low-browed cottage-looking dwelling-houses with peaked gables, all tend to a feeling as if the dial of time had been here turned backward to "the good old times" of a few centuries in the past.

Here is the old Norwich Castle, on the spot of a fortification built by "Uffa, King of the East Angles," in the year 575, and where Alfred the Great built a stronghold that was destroyed by Sweyn, the Danish king. Then Canute, in 1018, erected a castle, the core of which still stands in ornate architectural beauty within the present structure. Seven centuries ago it was, as

now, a prison, and in the reign of "Good Queen Bess" a record shows the imprisonment of some offenders who were "commytted for refusing to come to church in time for prayers;" and the philanthropic John Howard, in his humane visitation of prisons, complained of "an underground dungeon, in which the inmates descended by a ladder, the floor of which was often one or two feet deep with water."

The Cathedral of Norwich is eight hundred years old, and its imperishable walls are partly of flint that retains almost the original lustre of the fractured surfaces of the stones.

Norwich has a classic reputation for its great names of the past, and among those still living are some of the ablest and best-known medical men of this country. Dr. Cains, of Cambridge notoriety, was born here in 1510; Sir Thomas Browne was a Norwich physician; and the names of Martineau, Rigby, Dalrymple, Lubbock, Yelloby, and Crosse will ever be remembered.

Elaborate arrangements are made for conducting the business of the Association in various rooms for the general meeting of the body, and for the various sections of medicine, surgery, obstetrics, and State medicine, and there are also the most generous preparations for dinners and entertainments for the members and visitors. Private hospitality that will take no refusal stands with open doors and outstretched hands to welcome the stranger to those charming old English homesteads, and the home-like greeting that disarms all formality and blends him at once in family intimacy is something that requires the delightful experience for its appreciation.

A pleasant coincidence that adds to the gala character of the occasion is the arrival in the city of H.R.H. Prince Arthur, with a regiment of cavalry, who are to make permanent quarters here.

An important and interesting adjuvant of the meeting is the Annual Museum of articles arranged in the following classes: medical and surgical instruments and appliances; chemicals and apparatus; drugs and articles of diet; microscopes and apparatus, and microscopic specimens; calculi; general pathological specimens, casts, etc.; pathological photographs, drawings, and diagrams; drawings and models of ventilation; ancient instruments; miscellaneous.

I notice among the large number arriving such prominent members of the profession as Sir William Fergusson, Sir James Paget, Druitt, Reynolds, Croft, Sibson, Duncan, Barnes, Southam, Tupe, Quain, Barwell, Macleod, Tait, Hewitt, Sims, Parker, Lawson, Kidd, Haughton, Hart, Tufnell, Bennett, Aveling, Buchanan, Foster, Cormack, Lund, Steele, Nales, Stewart, Clarke, Haviland, Falconer; and such resident members as Cadge, Bateman, Copeman, Master, and Crosse are in attendance. About three hundred are at this time enrolled.

The meeting was opened by the president, Sir William Fergusson, in an eloquent address, alluding to the classic memories of the place, and particularly to its high professional character, developed by the line of

great surgeons whose names I have already mentioned. The distinguished and dignified bearing of the speaker, with his fine personal appearance, his tall, handsome, erect figure, his snowy hair, broad forehead, bright dark eyes, and pale intellectual face, make him a fitting personage to initiate the business of this important assemblage. It may be interesting to those who have not seen Sir William Fergusson to know that his resemblance to the late Dr. Wilson Jewell, of Philadelphia, is most decided and striking.

Then followed the address of the President-elect, Dr. Copeman, of Norwich, in which he considered some matters of sanitary science, and, alluding to the necessity, in the advanced stage of the science, of the division of labor in making physiological and clinical investigations, said,—

“When we consider what large numbers now belong to this Association, and the great amount of mind and talent embraced in it, it is difficult to say what are to be the limits of its usefulness and of its responsibility. It no doubt behooves us, individually and collectively, to turn over in our minds how we can best contribute to the accomplishment of the great results expected of us. Two things strike me as especially needful: first, that we should attempt the elucidation of many phenomena we meet with, by earnest physiological research; and, secondly, that we should endeavor, above all things, to add to the not too ample store of practical facts in the use of remedies for the cure of disease. These two departments of study cannot be fully undertaken by the same individuals.

“Physiological research, to be worth what it ought to be, requires the close application of vigorous minds adapted to the science and imbued with a love of it, but free also from all anxiety about the ways and means of providing for their daily wants and necessities. All so engaged ought to have, or be provided with, sufficient means to enable them to devote their whole time and attention to their work, without the cares and troubles of practice; whilst, on the other hand, those who are engaged in the great and paramount object of curing disease cannot possibly spare the necessary time for minute physiological investigations. Each, however, can materially assist the other: the practitioner can furnish facts and observations which may greatly assist the physiologist in his experiments, and the latter can enlighten the former by giving reasons for the facts presented to his notice. The majority of us must be practitioners, and earn our living by practice; but I should hope, in a society like ours, means will ere long be found to supply the necessary funds to a certain number of young and healthful minds, congenial to the work, to enable them to devote their time and energies to physiology as a separate study.”

On the second day of the meeting, Dr. Russell Reynolds delivered the address in medicine, which was a beautifully philosophical reasoning on the mystery of life. He repudiated the idea of life being nothing more than an aggregation of the resultant movements of heat, light, electricity, etc. Impressions from without, he

said, may determine the occurrence of motion or sensation; but the secret of life is still hidden in the organism which transmits the one into the other. Physical force may be correlated to vital acts, but life itself is the special property or condition of the special material which effects that peculiar relation, and it is as far from comprehension now as it was a thousand years ago. Heat applied to a fertilized and living egg may set in motion all those chemical and physical changes and movements which make up the living processes of a growing bird; but if the egg be not living to begin with, heat but hastens another series of chemical changes,—those of disintegration, putrefaction, and decay. Life is still hidden in the wonderful cells from which all these changes of structure and function take their start. If we apply electricity to a nerve-trunk or a cerebral convulsion, motions of a definite character may result, but the secret of life still lies hidden in the properties of those nervous elements. Every so-called chemical “elementary body” is known only by its power of so modifying forces and material as to be distinct in its sum of properties from every other elementary body. Each of them has in itself a “something” which makes it what it is, and to which we unconsciously refer in thought when we give them names and places in scientific categories. This “tendency to individuation,” as it has been called, is what constitutes that which has been termed their “life.” The same mode of thought is true with regard to the living organic body: that which makes it living, which alone justifies the attribution to it of the properties of life, is the possession of an individual power of behaving in such a way under given circumstances, and amidst the brunt of conflicting forces, and surrounded by varying materials, that it evolves the phenomena we designate as vital. Many are disposed to think that if we could only make our experiments a little more clever we may get rid of the term and the idea of life itself, and so make a great advance in science. It may be that this will be done; but Dr. Reynolds believes that it will not, that there will ever remain the same kind of mystery with regard to life itself as that which still shrouds the nature of the simple forces.

The General Secretary, Mr. Fouhes, read the report of the Council, the president of which is Mr. Southam, of Manchester. The report stated that the Association now numbered between five and six thousand members; that its financial condition was satisfactory; that the income of the past year was \$42,000; and it was proposed that a grant of one thousand dollars be made in aid of researches in medicine and the allied sciences.

It was unanimously resolved that the next meeting of the Association shall be held in Edinburgh, under the presidency of Sir Robert Christison.

In the Section of Medicine, the President, Dr. Eade, considered the nervous system in reference to practical medicine, and alluded to the prevailing tendency of medical investigation in that direction as illustrated by the papers about to be presented at the meeting. He remarked that, “The more exact knowledge which we

now possess of the brain and its subdivisions, as well as of its vascular supply and distribution; also of the functions of the ganglionic and vaso-motor nerves; together with the ascertainment of the great principle that vascular supply is regulated by the inhibitory action of the nerves, and that removal of this governing influence and control admits of ungoverned local action, *i.e.*, disease—have been sufficient to stimulate to fresh and active inquiry in this direction. And well it may be so, when we see that many previously obscure diseases (notably chorea and epilepsy, and many varieties of paralysis) have been already rendered more intelligible through this knowledge, and that the whole process of inflammation itself is in a fair way of being at length referred to its evidently proper position of a paresis or functional paralysis."

The opening of the proceedings of the Section on Surgery was by Sir James Paget, who referred to his first surgical training in Norwich, before he left it for his after-studentship in London, and compared surgical practice of that day with the present. He referred to his early careful and full notes of cases and observations made here, and said, "I found there some things which made me fear lest in our progress we should have let fall some of the things which we had better have held, and are now regarding some things too lightly that then seemed very grave, and perhaps are so still. For among the records which I found are records of methods of practice now almost completely disused, and yet in which I feel confident there was much right. I find, for example, a large and almost uniform practice of bleeding for all acute diseases, for many chronic, for most of those that were unknown or uncertain, and for a large proportion of cases in which there seemed to be nothing the matter. Trying to learn something from these things, I came to one or two conclusions which I am sure the younger members of the profession need to have much impressed on them. One of them is that at the present day we undoubtedly over-value the blood and estimate too cautiously the loss of it. I will venture to say that there are few persons in this room who might not be bled to fainting, and to-morrow be almost unconscious of it, and perhaps, in this week of hospitalities, might even be the better."

R. J. LEVIS.

SELECTIONS.

PARTICULARS OF A CASE IN WHICH CARBURETTED HYDROGEN WAS FORMED IN THE HUMAN STOMACH—A READY METHOD OF WASHING OUT THE STOMACH.

TOWARDS the end of last year, a man presented himself, during the consulting-hour of Prof. Frerichs, who declared that he had both a gas- and a vinegar-manufactory in his stomach. These, he said, worked alternately, so that at one time he brought up quantities of strongly acidulated matter, at another he belched quantities of gas which burnt, when a lighted match was applied to it, with a brilliant flame. In

proof of this latter assertion, having twisted a piece of paper into a roll and placed it like a gas-burner in his mouth, he applied, at the moment of an eructation, a match to its end, when a brilliant bright-yellow flame, fully a foot long, burst forth.

There could be no doubt that we had here to do with a case of abnormal digestion, with the formation of stable and unstable products of fermentation; the question being, what was the nature of the latter. For though the eructation of inflammable gas from the stomach has already been observed, and the gas itself analyzed (*vide* the analysis of Carius and Popoff), still the color of the flame has invariably been a pale blue, showing the great preponderance of hydrogen; whereas in this case the yellow color of the flame seemed to show the presence of carburetted hydrogen.*

The physical examination of the patient disclosed a very distended condition of the stomach, to account for which it seemed probable that there was a narrowing of the pylorus, caused by the contraction of a cicatrix of an ordinary round ulcer.

As I have for some time devoted myself to gasometrical analysis (*vide* my works "Ueber den CO₂ gehalt des Harns im Fieber," and "Beiträge zur Gasometrie menschliches Transudate," in Reichert and Du Bois-Reymond's *Archiv für Physiologie*), the chemical examination of the solid and gaseous excreta from our patient's stomach was confided by Prof. Frerichs to my colleague, Dr. Russstein, and myself.

The analyses were conducted in the usual manner, the gas being collected over quicksilver by means of a pipe from the patient's mouth, and gave the following volumetric results:

First Analysis.				Second Analysis.			
CO ₂	.	.	17.40	.	.	.	20.57
H	.	.	21.52	.	.	.	20.57
CH ₄	.	.	2.71	.	.	.	10.75
O	.	.	11.91	.	.	.	6.72
N	.	.	46.44	.	.	.	41.38
With traces of SH ₂ .							

In some of the matter vomited by the patient some days afterwards, we were able to demonstrate the presence of lactic, butyric, and acetic acids, and some of their homologues (not, however, quantitatively determined), sugar and dextrose.

Under the microscope all the well-known elements of food undergoing fermentation in the stomach were observed, of which I will only mention some very large specimens of sarcina ventriculi, the yeast fungus, and rod-shaped (stäbchenförmige) bodies, having the appearance of bacteria (the lactic acid fungus of Pasteur?).

[Dr. Ewald here enters upon an elaborate discussion of the fermentative changes resulting in the production of the gas in the stomach. This we omit.]

The treatment consisted in regulating carefully the patient's diet, and washing out the stomach by means of the stomach-pump. Under this treatment the discomfort he suffered was greatly lessened, and only once afterwards did he bring up inflammable gas, which, however, burnt with a blue flame. As he soon became quite an expert in introducing the stomach-pump, he has left us, and gone to the country to further recruit his health.

I will draw your attention to a very simple and readily available method of washing out the stomach, which I now always adopt, and which, on account of its great simplicity, seems likely to make the topical treatment of diseases of the stomach, especially in cases of poisoning, much more common. You take for

* In the *Berlin. Klin. Wochenschrift*, July 6 and 13, *vide* *London Medical Record*, Aug. 12, the case of Carius above referred to is given in full, as well as some additional observations relating to this curious affection.—Ed. J. H. G.

this purpose a piece of ordinary india-rubber tubing, such as is used for gas-lamps, about six feet long; you next round one end with a scissors, and, if necessary, cut two holes at a short distance from the end. This tube possesses quite sufficient rigidity to be passed without difficulty into the stomach. To the outer end you now fit a funnel, into which you can pour either water or a solution of soda, etc., according to circumstances. If you want to remove the contents of the stomach, you must sink the outer end of the tube to a level with the pubis, or even lower; then let the patient make a short but forcible contraction of the abdominal walls. By this means the tube is filled to its highest point with the fluid contents of the stomach, and becomes a siphon, the liquid continuing to flow until there is no more, or till the tube has got stopped up. This last seldom occurs if the tube is of a moderate calibre. Should it, however, happen, or should the abdominal pressure be insufficient to fill the tube in the first instance, or the patient be insensible, or any similar difficulty arise, it can, in general, be readily overcome by fitting a common clyster syringe to the end of the tube, one stroke of the piston of which is generally sufficient to remove the difficulty, and the fluid continues to flow after the removal of the syringe. This method is evidently instantaneously available, provided that we can find a gas india-rubber tube; and it has another great advantage, viz., that with it any mechanical injury to the soft parts is impossible.*

In cases where the œsophagus is almost impervious from stricture, compression, or any other cause, I am in the habit of using very thin gum-elastic tubing, made especially for this purpose, within which a very thin piece of whalebone, like the stilet of a catheter, is introduced, in order to give it the necessary rigidity. The whalebone can be withdrawn without difficulty once the tube is passed. Since I have adopted this method, it is only during the first or second introduction of the tube that I have experienced any difficulty arising from the discomfort the operation causes to the patient.—*Dr. Ewald, Charité Hospital, Berlin, in Irish Hospital Gazette.*

GLEANINGS FROM OUR EXCHANGES.

TUMOR OF THE BREAST IN A MAN AGED SIXTY-EIGHT.—At the Surgical Society of Paris, a man aged sixty-eight was lately exhibited by M. Demarquay, from whom he had removed a tumor of the breast. The tumor was voluminous and composed of three cysts: the largest was of a bluish tinge, and threatened to burst. Complete absence of axillary glands. It first appeared three years ago. M. Demarquay stated that he had seen only two cases of cancer of the breast in men; the progress of the disease was rapid, and the axillary glands were affected. In the case under notice there is nothing of the kind; but a cyst was on the point of bursting, and an operation was, in consequence, considered advisable. Extirpation was performed without involving the pectoral aponeurosis; histological examination of the tumors proved the presence of cysts developed in the galactophorous tubes. M. Tillaux stated that, while he acknowledged the rarity of cancer of the breast in men, he had operated only a month ago on a man who had a tumor of the breast about the size of a large pea, which had attained its present volume in one year, and was accompanied by an abnormal development of the glands in the axilla. Microscopical examination proved the existence of cancer. The writer

of this note saw a case some four or five years ago in M. Maisonneuve's ward at the Hôtel-Dieu. The tumor was about the size of a Mandarin orange, which was removed by means of his caustic "flèches." The patient was a priest, aged about forty-five, and the tumor was rapid in its development; notwithstanding this, M. Maisonneuve was disposed to look upon the tumor as non-malignant, but microscopical examination proved it to be a cancerous tumor. This eminent surgeon stated that in all his practice, extending over forty years, this was only the second case he had met with.—*Paris Medical Record, July 1, 1874.*

ALCOHOLIC STRENGTH OF THE VARIOUS BITTERS.—Mr. Henry Vaughan, State Assayer of Rhode Island, gives the following results of a chemical examination of the more important "bitters" found in the market:

	Per cent.
Hoßtetter's Stomach Bitters	43.20
Baker's Stomach Bitters	40.57
Drake's Plantation Bitters	30.24
Sol. Frank's Panacea Bitters	37.20
Mishler's Herb Bitters	36.80
Dr. R. F. Hibbaw's Wild Cherry Bitters	35.89
Rush's Bitters "for the Stomach's Sake"	34.30
Dr. Fisch's Bitters	32.16
Baker's Orange Grove Bitters	25.70
Speer's Standard Wine Bitters	25.49
Traveller's Peruvian Bitters	22.40
Dr. Clarke's Sherry Wine Bitters	22.40
California Wine Bitters	18.20
Dr. Wheeler's Tonic Sherry Wine Bitters	14.66
Atwood's Quinine Tonic Bitters	40.10
Dr. Holmes's Golden Seal Bitters	34.24
Dr. Job Sweet's Strengthening Bitters	31.41
Webber's Strengthening Bitters	26.87
Flint's Quaker Bitters	22.99
Restorative Bitters	20.54
Luther's Temperance Bitters	16.68
Richardson's Bitters	59.14
Armington's Bitters	33.26
Davis's Bitters	30.50
Colton's Nervine Bitters	29.73
Dr. Warren's Bilious Bitters	29.60
Hartshorne's Bitters	27.35
Atwood's Jaundice Bitters	25.60
Puritan Bitters	25.60
Dr. Langley's Bitters	24.41
Dr. Hoofland's German Bitters	20.85
Oxygenated Bitters	19.28
Walker's Vinegar Bitters	7.50
Dr. Pierce's Bitters	6.36

—*The Laboratory.*

DETERMINATION OF THE SEX IN UTERO (*The Medical Examiner*, August 15, 1874).—Drs. Strong and Steele make the following deductions from their joint observations of one hundred cases:

1. In the majority of cases male foetal hearts are slower than female.
2. One hundred and thirty-two foetal pulsations per minute is the average which constitutes a dividing line between the sexes. Below this, sixty-eight and four-sevenths per cent. are males, twenty per cent. are females, eleven and three-sevenths per cent. are doubtful. Above this, fifty-three and one-third per cent. are females, twenty-six and two-thirds per cent. are males, twenty per cent. doubtful.
3. The most accurate observations are made during the last four weeks of gestation.
4. The rapidity of the heart's action is increased in proportion to the feebleness of the foetus.
5. Calcareous or fatty degeneration of the placenta renders the pulsations feeble and irregular.
6. In some cases it would be possible to diagnose

* NOTE BY TRANSLATOR.—In the *British Medical Journal* of February 24, 1874, p. 205, will be found a description of a very similar apparatus for washing out the stomach, invented by L. H. Tossill, M.B.

diseased conditions of the placenta from careful observation of the foetal heart.

In conclusion, it may be generally stated that an opinion as to the sex of the child, founded on the rate of the foetal pulse, is of little more value than a guess, while the presentation, generally, and the exact position, possibly, may be accurately determined.

FATTY GROWTH IN THE CORPUS CALLOSUM (*British Medical Journal*, July 18, 1874).—At an autopsy on a case of tubercular meningitis, Dr. Joseph Coats discovered a peculiar pathological condition which he describes as follows. On the upper surface of the corpus callosum there was an elongated yellow structure, occupying its entire length and in the middle line. It was of nearly the same bulk in every part, averaging about five-sixteenths of an inch in breadth, and about three-sixteenths in thickness. It had the appearance of a narrow ridge on the corpus callosum, and seemed to be involved in the pia mater, a layer of which covered its surface, and another separated it from the nervous tissue of the corpus callosum beneath. This growth was found, on microscopic examination, to be composed of typical adipose tissue, the large fat-cells having exactly the normal appearance.

TREATMENT OF CHRONIC NASAL CATARRH (*The American Medical Journal*, August, 1874).—Dr. John W. Thraillkill describes an instrument devised by himself for making topical applications of powdered substances to the nasal passages. It consists of a bent glass tube connected by a rubber tube with a glass mouth-piece. The powder is put into the glass tube, which is inserted into the nose to the distance of half an inch or more; the patient then puts the mouth-piece into his mouth, and blows the powder with a quick, strong blast into the nose. This plan has many advantages: the medicament is not drawn back into the pharynx, as when it is snuffed in, and it is distributed much more equally through the nasal cavities. A powder consisting of one drachm of calomel to two drachms of sugar of milk has been found highly efficacious in chronic cases of nasal catarrh which had lasted for years and had resisted treatment by douches, washes, etc.

TRAUMATIC TETANUS—MORPHIA—RECOVERY (*The Nashville Journal of Medicine and Surgery*, August, 1874).—Dr. R. D. Winsett reports the case of a cavalry officer, æt. 24, who received a wound in the glutei muscles, which was followed in six or seven days by marked tetanic symptoms, with spasms, complete trismus, and opisthotonos. He was ordered every three hours a pill containing one grain each of powdered camphor and assafoetida, and a half-grain each of extract of belladonna and sulphate of morphia. In addition, he was given a grain of sulphate of morphia every hour, with large quantities of gruel and milk-punch. He continued without much change for eight days, the same treatment being persevered in,—sixteen grains of morphia being given daily. At the end of that time he began to improve, and in a few weeks entirely recovered.

CASE OF OCCLUSION OF THE GALL-BLADDER (*British Medical Journal*, July 18, 1874).—Mr. Corrie Jackson, while making an autopsy on a case of apoplexy, discovered that the liver was enormously enlarged, to the weight of nearly ten pounds; the structure was tolerably healthy. The gall-bladder was filled with calculi, to the number of two hundred and thirty-seven; the aggregate weight being 420 grains. The calculi were an almost exact representation, in size, appearance, and color, of grains of Indian corn, rounded on their outer surfaces next the gall-bladder, and flattened internally by their compression and packing. There was

no form of jaundice. The ductus communis choledochus was patent; and the circulation of bile in the gall-bladder could only have been carried on in the interstices of the outer surfaces of the calculi. There was no history of any dyspepsia, constipation, or hemorrhoids.

MAMMARY ABSCESS IN INFANTS (*British Medical Journal*, August 8, 1874).—From a number of communications received, it seems that mammary abscess is of very frequent occurrence in children otherwise entirely healthy. It is sometimes due to improper irritation of the nipple by the nurse, but oftener to the retention of a secretion of thin milk, which takes place in the breasts of male as well as female children, and, when prevented from escaping, sets up inflammation and suppuration.

MISCELLANY.

MISSIONARY MEDICINE AND THE CHINESE.—Dr. Dudgeon, in the annual report of the Peking Hospital for 1873 to the London Missionary Society, states that during the past year the entire number of patients prescribed for was 18,300. The influence of the hospital is said to be yearly extending, and its connection with the higher and official classes steadily increasing. A lectureship on anatomy and physiology in connection with the present college has, moreover, brought Dr. Dudgeon into close contact, professionally and otherwise, with the highest officials of the government.

A YOUNG Japanese, Susum Sato by name, has obtained, after a highly creditable examination, the degree of M.D., Berlin. His graduation thesis, on the subject of Infantile Diarrhœa, is said to have been exceptionally good. The rapidity and ease with which Mongolians devoted to study acquire a knowledge of foreign languages are remarkable.

DR. GEORGE M. BEARD, of New York, has issued an elaborate circular, asking for information in regard to cases of hay-fever. Those who are able and willing to aid him will please apply by letter for copies.

NOTES AND QUERIES.

THE ADAMS COUNTY MEDICAL ASSOCIATION.

This Association held its annual meeting on Tuesday, Sept. 1, and elected the following gentlemen as officers for the present year:

President, Dr. J. W. C. O'Neal.

First Vice-President, Dr. I. W. Pierson.

Second Vice-President, Dr. I. L. Baehr.

Recording Secretary, Dr. Charles Horner.

Corresponding Secretary, Dr. William J. McClure.

Treasurer, Dr. E. W. Mumma.

OFFICIAL LIST

OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U.S. ARMY, FROM SEPTEMBER 1 TO SEPTEMBER 7, 1874, INCLUSIVE.

HARTSUFF, A., ASSISTANT-SURGEON.—Assigned to duty as Post-Surgeon at Fort Laramie, Wyoming Territory. S. O. 126, Department of the Platte, August 29, 1874.

MONROE, F. LEB., ASSISTANT-SURGEON.—Granted leave of absence for one month, provided he furnishes a suitable substitute during his absence. S. O. 139, Department of the South, August 29, 1874.

SATURDAY, SEPTEMBER 19, 1874.

ORIGINAL COMMUNICATIONS.

A CASE OF CHRONIC PERICARDITIS, WITH TUBERCULOUS PLEURISY.

BY WILLIAM PEPPER, M.D.,

Professor of Clinical Medicine in the University of Pennsylvania.

A BRIEF and partial report of the following case was published in an article on the treatment of Pleural Effusions, which appeared in the number of this journal for July 11, 1874; but, as the case has since terminated, and the results have seemed of unusual clinical interest, the entire report is now given:

Mr. B., æt. 26, of well-marked strumous diathesis, had a grave attack of diphtheria in the winter of 1872-3, and had never recovered his previous health, although he was under no medical treatment. In March, 1874, he consulted Dr. Yarrow, his family physician, who found him suffering with extreme dyspnœa, connected with large double pleural effusion. The origin and development of this had been entirely latent, and the symptoms had been gradually increasing. The dyspnœa was constant and alarming, attended with violent play of the alæ nasi; there was also extreme pallor of the surface.

Careful internal treatment caused a reduction in the amount of the effusion on the left side, but influenced that on the right side very slightly. I saw the case with Dr. Yarrow in May, with a view of determining the propriety of paracentesis. The evidences of pleural effusion on both sides were very distinct. On the right side the line of dulness reached to the third interspace, in the sitting posture, and was much influenced by change of position. On the left side the effusion came up to the fourth interspace. The entire thorax was distended; the respiratory movements were abrupt and jerking, and consisted mainly of elevation and depression, with some expansion of the apices. They varied from twenty-eight to thirty-six in a minute. The respiratory murmur at both apices was somewhat exaggerated, but otherwise healthy: the percussion-resonance was pseudo-tympanic. The impulse of the heart was very feebly and indistinctly felt over a larger area than normal, and somewhat higher than its normal position. On auscultation, the cardiac sounds were distant, feeble, and muffled, but without any valvular murmur. There was no thrill, nor any retraction of the intercostal tissues over the apex. The pulse was feeble, frequent, varying from 108 to 124, and irregular. There was some hectic irritation, but not enough to countenance the idea of the effusion being purulent. There was marked fulness of the large veins in the neck. There was a good deal of cough, with scanty mucous sputa. The abdomen was tumid; the liver was pushed downwards, and was very painful on pressure. There was but moderate enlargement of the spleen, and none of any of the lymphatic glands. The urine was free from albumen. The appetite was poor, and the action of the bowels irregular.

The diagnosis determined upon was that of tuberculous pleurisy with extensive serous effusion. For a short time the attempt to afford relief by internal treatment was continued, in consequence of the unfavorable nature of the case. This treatment consisted of a milk diet, quinia, iodide of potassium, and digitalis. It was soon evident that no great relief could be hoped for.

He took milk in large quantities, but the stomach grew irritable, and diarrhœa with mucoid stools set in.

After careful consultation, we decided, on June 9, to puncture the right thorax in the sixth intercostal space, in the line of the anterior border of the axilla. Dieulafoy's aspirator was employed, and seventy-five fluid-ounces of straw-colored serum were withdrawn. The closing portion of the operation was very painful,—evidently in consequence of the powerful traction upon the expanding lung. There was still more effusion, but the flow was interrupted by the lung coming in contact with the canula. Immediately after the operation the patient was seized with violent paroxysmal cough, which caused so much pain as to require repeated doses of opium. There was immediate relief of respiration, with a return of respiratory murmur over a part of the area from which it had previously been absent. About six hours later, a very alarming syncopal attack occurred, from which he was roused only by repeated and large doses of stimulants. During the night copious sero-albuminous expectoration commenced, and in the course of the next twenty-four hours almost a pint was discharged. This was compared by the family to the fluid which had been evacuated from the chest, consisting of a clear, serous fluid, in which a large muco-fibrinous coagulum formed. There seemed no real purulent element with it. This copious expectoration continued for about forty-eight hours, becoming mixed with a considerable amount of blood. After this it diminished, and the blood gradually disappeared.

Physical examination showed marked diminution of dulness on right side, with a return of respiratory murmur, mixed with coarse crackling and grating friction-sounds. There seemed to be some reduction in effusion on left side also, but no change could be detected in the action of the heart. It still remained irregular and feeble, with obscure sounds, free from valvular murmur. It was impossible to determine the area of cardiac dulness, owing to the double pleural effusion. The patient experienced a great deal of relief for several days, when again severe dyspnœa gradually set in.

Coarse friction-sounds now appeared over the anterior surface of the left chest, especially marked about the border of the præcordia. Occasionally this friction-sound was of cardiac rhythm, and was detected during suspended breathing. Its position indicated that it was produced by the rubbing of the heart against the concavity of the left lung.

The abdomen continued tumid, with great tenderness over the upper portion. The liver returned in a slight degree only towards its normal position. The irritability of the stomach continued, milk being the only food taken in any quantity. Diarrhœa persisted, requiring the use of opiate suppositories; and œdema of the legs appeared, and rapidly increased. Cough continued, though less troublesome than immediately after the operation. The sputa were purulent, and occasionally blood-stained. About two weeks after the operation he was suddenly seized with a profuse hæmoptysis, to the amount of not less than thirty fluid-ounces in the course of twelve hours. For several days expectoration was quite copious and largely composed of blood.

On June 25 another syncopal attack occurred, attended with prolonged failure of the heart's action. He reacted slowly and imperfectly, and afterwards began to sink gradually, and died June 30.

At the post-mortem examination (twenty-four hours after death), both pleural sacs contained a large amount of clear serous effusion. The surface of both pleuræ was thickly studded with gray milary tubercles, with scarcely any formation of false membranes. The lungs were

not adherent, but were both compressed and dense, and forced upwards and backwards by the effusion. On section of the right lung, numerous spots of apoplectic infarction were found. These seemed comparatively recent, as no changes of color had occurred in the effused blood. There were but very few and small patches of this kind in the left lung. There were a few milary tubercles scattered through the tissue of both lungs. There was no trace left to mark the point of puncture.

There was a small amount of serum in the peritoneal cavity, but no signs of inflammation or of tuberculous formation on the peritoneum. The *liver* was enlarged, deeply congested (nutmeg), and was pushed downwards so that at least half of its bulk lay below the margin of the ribs. The *spleen* was nearly threefold its normal size, its pulp firm, and apparently normal, without any tuberculous formations. The *kidneys* were congested, but otherwise healthy.

The *heart* was pressed backwards by the pleural effusion. The outside of the pericardial sac was roughened, and studded with milary granulations. On cutting into the pericardial sac, its cavity was found obliterated, the heart being imbedded in a layer of old organized lymph, half an inch in thickness, arranged in coarse meshes, infiltrated with sero-purulent fluid. The layers of the pericardium were thickened and vascular, and the lesion was evidently one of long duration. The heart was somewhat enlarged; the valves were healthy, but the muscular structure showed evidences of fatty degeneration.

The case here reported seems to present interesting questions as to its diagnosis, pathology, and treatment. The recognition of the pleural effusion was as simple as possible, but it was not so easy to determine its cause. The extreme pallor and prostration which marked the case from the beginning have been already noted; and so unusual were they as strongly to suggest the existence of some serious cachexia. The urine was entirely normal; and there had been no symptom to attract attention to the kidneys as being at fault. The idea of leukæmia was entertained and dismissed on account of the absence of any marked splenic or lymphatic enlargement, and from the early appearance of double hydrothorax without any other form of dropsy. The idea of the effusion depending on tuberculous disease of the pleura seemed the most plausible, on account of the latent and painless origin, the bilateral character of the effusion, the existence of hectic irritation, though of but slight degree, the strumous diathesis of the patient, and the absence of symptoms of any other cachexia. The absence of hæmoptysis or of any physical sign of tuberculous disease of the lung-tissue was not surprising, since in some cases of serous tuberculosis the viscera escape almost entirely. The peculiar absence of cardiac impulse, and the feeble, distant, and irregular character of the sounds, were observed and commented upon, but, in the absence of any other sign of valvular disease or of pericarditis, were attributed to the pressure of the fluid in the two pleural sacs.

It will be seen, however, that, although the diagnosis was correct so far as it went, the remarkable chronic pericarditis escaped recognition entirely. The characters of this latter lesion indicated that it was of long standing; and my opinion is that it was the initial condition, and possibly dated back to

the attack of diphtheria. Of late years inflammation of the membranes of the heart (especially of the endocardium) associated with granular degeneration of the muscular fibre has been quite frequently observed as a complication of this affection. If the disease had this origin in the present case, the protracted irritation due to the unhealthy suppurative inflammation developed the pre-existing tuberculosis diathesis and led to the formation of milary tubercles on the pleura. It is also seen that the extensive effusion recognized a double cause, the venous stasis due to the condition of the heart, and the disease of the pleuræ themselves. The occurrence of pulmonary apoplexy was entirely dependent upon the cardiac disease, although, as will be hereafter remarked, it may have been directly connected with the operation of paracentesis.

In regard to the treatment, the hopeless nature of the case was easily recognized from an early period. Still, it was highly interesting to observe, even in the presence of such extreme cardiac embarrassment, the marked action of digitalis. Beginning with ten drops of the tincture three times a day, it was increased to fifteen drops every four hours. The effect of this was to reduce the pulse from 110 or 120 to 96, to render it more regular, to increase the flow of urine, and to diminish the effusion in the left chest. Unfortunately, with the advance of the disease, digitalis lost the power of controlling the symptoms.

In the performance of paracentesis no difficulty was experienced, except from the severe pain which attended the latter part of the operation; but I would call especial attention to the phenomena which followed,—the occurrence of hæmoptysis and of sero-albuminous expectoration. It was evident, from the painful sense of the traction exerted by the aspirator after a portion of the effusion had been withdrawn, that the lung was unable to expand freely to replace it. It is easy to imagine the effect of this powerful traction upon a lung whose veins were engorged from cardiac disease, and whose vesicular tissue had been so long compressed by effusion as to render it to a great extent unable to expand. The first result would be to induce increased effusion of serum from the vessels of the bronchial mucous membrane, constituting the peculiar sero-albuminous expectoration described; and if the action were powerful enough, it might further cause hemorrhage either from the bronchi, leading to hæmoptysis, or in the vesicular and interstitial tissue, producing apoplectic infarction. It is true that in this case the condition of the heart must have had much to do with the production of these latter phenomena, but the facts that hæmoptysis appeared for the first time immediately after the performance of paracentesis, and that the patches of pulmonary apoplexy were evidently of recent occurrence, show conclusively that this operation was directly connected with them. It is, I think, highly probable that all cases of this comparatively rare form of expectoration after paracentesis, called by the French writers "sero-albuminous," are due to the excessive traction upon the tissue of a lung whose vesicular structure is unable to expand; an

engorgement of the blood-vessels is induced, which is partly relieved by copious effusion of serum from the bronchial mucous membrane. It remains only to notice the syncopal attacks, which were similar, although unusually severe, to those which occur in some uncomplicated cases of hydrothorax. In fact, it has been frequently observed that sudden death may occur most unexpectedly from the interference with the heart's action caused by an excessive effusion, even on one side. It will be readily understood how liable our patient must have been to such alarming attacks, and it is rather to be wondered at that sudden death had not occurred. It is difficult to explain the connection of the operation with the syncopal attack which took place six hours subsequently. Unless a curious coincidence, it was probably due to the excitement and fatigue attendant upon the operation itself.

The liability to such seizures was clearly shown by the occurrence a few days afterwards of an even more alarming attack, despite the relief afforded by the withdrawal of so large a quantity of serum. The operation itself was quite successful, and seems to have been clearly indicated, although, even without a knowledge of the latent pericarditis, it was impossible to hope that it would afford more than temporary relief.

INVERSION OF THE UTERUS FROM SHORT CORD.

BY D. F. WOODS, M.D.

INVERSION of the uterus is, fortunately, a rare accident. On account of its infrequency the following case is of value, and its history may not prove uninteresting to the readers of the *Medical Times*:

About a year ago I attended Mrs. B. in her first confinement. When I arrived at her house, I found her in the first stage of labor. There was nothing worthy of note in this dilating stage. Soon after the commencement of the second stage, the patient complained of a dragging or tearing pain in the region of the umbilicus, which pain was greatly intensified during the contractions of the uterus. Each bearing-down effort was preceded and accompanied by a feeling of dread, and as labor progressed the sensation of dragging or tearing pain became more and more agonizing. The woman described it as "a feeling as if her whole insides were tearing to pieces."

The child presented in the second position (right occipito-anterior) of the vertex. This dragging or tearing sensation lasted through the whole of the second stage, which was prolonged about eight hours.

As soon as the head was delivered, and I could reach the cord, I cut it, applying the ligature some time after to the child. The cutting of the cord did not, however, arrest the already partially-inverted uterus, for a heavy pain stopped by the contraction of the diaphragm brought down the whole contents,—the uterus completely inverted, with its placenta firmly adherent at its fundus. Hemorrhage occurred in great profusion from the inverted organ, which seemed to me to extend to the patient's knees.

With considerable effort I tore the placenta from its firm plastic adhesions, and afterwards endeavored to restore the uterus to its normal position. This at first

was no easy matter, as I found the more I attempted to restore it, the more contracted its mouth became.

Finally I resorted to the following method. With the hips of my patient considerably elevated, the thumbs of both hands applied to the fundus, by degrees I was able to overcome the resistance, and make sufficient indentation to push the fundus with my right hand through the os uteri, which gradually relaxed as it had contracted. By degrees I restored the organ to its normal position in the abdomen. When this was accomplished, my right hand was introduced into the cavity of the uterus, where, holding it, I ordered three drachms of wine of ergot to be given, at the same time making slight friction over the abdomen with the other hand. I soon felt the uterus contract firmly upon my introduced hand, which I gradually withdrew.

The hemorrhage, which to this moment was very profuse, ceased. I applied a bandage with a firm compress to hold the uterus contracted, gave a large anodyne, and ordered two drachms of the wine of ergot to be continued every half-hour until four doses were given, and after that gradually discontinued. The ergot was kept up for ten days, in doses of a drachm every three hours. My patient was considerably exhausted from the excessive hemorrhage, and the next day complained of considerable soreness over the abdomen. Independent of these, she gradually recovered without any further serious untoward symptoms.

The child (a female) was slightly asphyxiated at birth, but soon recovered under the simple treatment of alternate cold and hot douche, and she is now a large child, about a year old.

An examination of the placenta showed signs of former inflammation at its uterine connections, evinced by an excess of what appeared to be fibrinous coagula of considerable hardness. The cord was bound round in a ball with plastic exudation, holding it firmly and moulding it closely to the amniotic layer at the fundus where attachment took place.

The whole length of the cord was not six inches. The woman had a number of falls at various intervals during her pregnancy. At one time, the pavement being slippery, she fell on her door-step, striking her stomach. The injury at no time gave her severe annoyance, except muscular soreness the next day,—not sufficient to call in a physician.

Since the occurrence of the above, I have attended this same patient in her second confinement; the interval being a few days over thirteen months. This last is a large, well-formed male child, and presented in the left oblique of vertex (left occipito-anterior). The mother had a quick delivery, and no difficulty whatever. Both mother and child are doing well.

A CASE OF RUPTURE OF THE BICEPS.

BY J. BROOKE,

Assistant-Surgeon U.S.A.

THE case of rupture of the biceps reported in a recent number of the *Medical Times* recalls one which I observed over five years since.

A discharged soldier, who was an applicant for admission to the Asylum for Disabled Volunteers, presented (I forget in which arm) a deep depression almost in the middle of the belly of the biceps, the muscle having evidently been ruptured and the torn ends remaining separated by an interval of at

least an inch. There seemed to be no muscular connection between the torn ends. The man stated that while one of a party carrying a small house or sentry-box he suddenly felt something give way, and the arm became comparatively powerless. The accident occurred a considerable time before I saw him,—I think over a year,—and the power of flexing the fore-arm was still greatly impaired.

SITKA, ALASKA, August 3, 1874.

BELLADONNA IN SPASMODIC ASTHMA.

BY GEORGE G. WOOD, M.D.

THE communication in the *Philadelphia Medical Times* for August 29, on "Chloral Hydrate and Bromide of Potassium in Spasmodic Asthma," by Dr. Julio J. Lamadrid, has led me to offer my experience with belladonna in the same disease. Being located in a neighborhood where spasmodic asthma abounds plentifully in the autumn, I have had a fine opportunity for testing the value of the various remedies recommended for its treatment. Of all tried, which includes the hydrate of chloral and bromide of potassium, of whose use in spasmodic asthma in this country Dr. Lamadrid claims priority, I greatly prefer belladonna. It is only when belladonna, after a good trial, proves to be contraindicated, for reasons I shall hereafter state, that I make use of chloral; then I consider it the next most available remedy. Bromide of potassium has failed to produce much effect in the cases where I have tried it, either in conjunction with chloral or alone.

Belladonna, by actual experiments on animals, has been found to dilate the bronchial tubes, and keep them dilated so long as the animal remains under the influence of the drug. And, further, this dilatation persists notwithstanding irritants be employed for the purpose of making them contract. These experiments very satisfactorily account for the medicinal action of belladonna in the treatment of spasmodic asthma.

The pathology of the disease teaches us "that it is owing to a spasmodic constriction of the smaller bronchial tubes, by tonic contraction of their involuntary muscular fibres."

Belladonna, then, acts simply by relieving this constriction of the bronchial tubes.

To get the good effects of belladonna in asthma, it must be given in heroic doses. I usually employ the tincture of the United States Pharmacopœia, in doses ranging from twenty to sixty drops. The strength of the tincture differs so much, as commonly kept in the shops, that the size of the dose must be lost sight of, and the quantity given be regulated by the effect produced. It may be given during the paroxysm with great advantage, but it acts best when given before the attack commences. For example, if the patient has nocturnal attacks coming on after midnight, as is usual, give him a dose just before going to bed, and repeat it if necessary to produce sound sleep. He fails to awake at the usual time for the attack to commence, and sleeps on, awakening in the morning very much refreshed

and strengthened. This treatment may be repeated night after night, until sufficient time has been had to remove the tendency of the disease to return, either by changing his location or adopting other requisite treatment, as the case may call for. I could relate several cases to prove the above statements, but will have to omit them for want of space.

Sometimes, but not often, belladonna produces dryness of the fauces, and delirium. These are indications which show that it should be discontinued and hydrate of chloral should be employed in its stead. It may be used on the same principles as belladonna to produce sleep and thus ward off attacks. For the past two years I have been treating spasmodic asthma on these principles, and with most satisfactory results; yet I do not claim any originality in their conception: they are simply hints gathered from many sources, their value being well proven, to my mind, by experience.

MUNCY, PENNA., September 4, 1874.

TRANSLATIONS.

AMPUTATION OF PART OF THE COCCYX IN AMUSSAT'S OPERATION FOR IMPERFORATE RECTUM.—In a communication read before the Société de Chirurgie recently (*Bulletin de la Société de Chirurgie de Paris*), M. Verneuil recommends resection of the coccyx in order to facilitate the establishment of a perineal anus in cases of imperforate rectum. By this means more room is given in which to operate, the ends of the operation are more easily attained, and the after-results are more satisfactory, than in the ordinary procedure, without adding to it any corresponding danger.

He condemns the practice of treating cases of imperforation of the anus by thrusting a trocar in the direction of the supposed termination of the bowel, as being uncertain, inefficient, and dangerous, and recommends the median incision in all cases, with removal of part of the coccyx when necessary. He became convinced of the value of this as early as 1852, by the autopsy of an infant upon whom Littré's operation had been ineffectually performed. In this case the anus opened into a cul-de-sac two centimetres in depth. In the dissection the occluded end of the rectum was found one centimetre above this, where it might have been reached by the ordinary Amussat's operation, although with some difficulty: this, however, could have been obviated by a resection of the coccyx, which brought the distended rectal pouch well into view.

Carrying this principle into practice, he has performed the operation six times, and the details of these cases occupy the greater part of his paper. In these cases—five male and one female—he obtained highly satisfactory results, the credit of which he gives to this modification, which he was obliged to resort to in five out of the six, and affirms that without this help in at least two of them he would have been obliged to relinquish the operation. Four of the children were born at term, one at eight months and one week, the other at eight and a half months. None of them showed any other vice of conformation. In four the anus was well defined, but terminated in a cul-de-sac averaging 12 millimetres in depth, and the intergluteal crease was well marked. In the other two the perineum was rounded and projecting; in one the anus was represented by a tubercle without any opening.

Regarding those simple cases where the occlusion consists merely of a membranous wall, he states that he

has never met with any of them. He has also sought in vain for the fibrous cord which is said to replace the obliterated portion of the intestine and act as a guide to the occlusion. It has been pointed out in dissections, but he found that when operating, if it existed, it was indistinguishable.

He claims that a resection of the coccyx shortens the operation and thus reduces the amount of hemorrhage. Besides exposing the intestine more readily, this operation facilitates materially the close approximation of the mucous and cutaneous edges by suture, thus making a natural muco-cutaneous outlet, and preventing the dangers of infiltration and abscess, or subsequent contraction.

Although four of the cases died subsequently, only one of them showed any symptoms of local trouble after the operation. This one suffered from secondary hemorrhage, orchitis, extensive erysipelas, followed by diarrhoea with prolapse of the bowel (which was reduced spontaneously), and finally died at the end of five weeks. In all of the cases the artificial anus performed its function in a satisfactory manner from first to last. In one case some contraction was noticed, which was remedied by a slight incision; but in none was there any abscess, severe inflammation, or peritonitis.

One of the successful cases was operated upon nine years ago, and the present condition is completely satisfactory. The abridgment of the coccyx is not noticeable, and he shows no material or functional trace of his malformation. In another case of four months' standing the success may be considered as assured. In this case, some months after the operation a urethro-anal fistule was discovered, which was evidently due to the persistence of a communication which is sometimes found in these cases as a cord leading from the bowel to the membranous portion of the urethra.

The paper ends with the following conclusions:

1. Perineal enterotomy is the operation of election in cases of ano-rectal imperforation.
2. It should be performed as soon as possible by the operation of Amussat, which is the least dangerous at the time, and more efficient ultimately.
3. It presents undeniable difficulties, connected with the discovery of the bowel and the fixation of it to the borders of the cutaneous surface.
4. The partial resection of about one centimetre of the coccyx, on an average, diminishes these difficulties considerably.
5. Without destroying much tissue, it allows a great enlargement of the field of operation, enables the operator to reach the rectum when high up, and to attach it to the skin without much traction, or requiring dangerous dissecting from antero-superior adhesions in order to make the bowel movable.
6. It saves us from plunging blindly into the pelvis, and protects the peritoneal cul-de-sac and urinary passages from accidental wounding.
7. It shortens the operation materially.
8. It is easy of execution, and seems, thus far, to be without dangers of its own.
9. The excision of the coccyx is not always necessary, but if after some fruitless attempts the intestine is not found in the wound, or, when found, does not come down well, it should be resorted to without hesitation.
10. If after the said resection the intestine is not *speedily* found, the perineum should be abandoned and the lumbar or iliac operation performed.
11. Perineal enterotomy, although carefully performed and definitively successful, may be followed by a peculiar variety of ano-urethral fistule due to the persistence of an embryonic structure.

In the discussion of this paper at the succeeding séance, M. Verneuil stated that by this means the intestine might be reached at a depth of three centimetres.

F. W.

TWO CASES OF MALIGNANT PUSTULE (Dr. B. Fränkel: *Berliner Klin. Wochenschrift*, No. 22, 1874).—The first patient was a mechanic, aged 42, employed in the shops of a railroad, and was admitted into the Augusta Hospital on the 31st of January, on account of an inflammatory swelling of the neck. He was seen by Dr. F. on the 1st of February, who then found an insignificant-looking crust near the chin and just above the edge of the under jaw, which was surrounded by a swollen area of a bright-red color. The appearance presented was very much that of an acne pustule which had been scratched and irritated. The patient stated that he had noticed a few days previously, at the affected point, a little pimple, which annoyed him by itching; that he had scratched and irritated it; that, in consequence of this, the redness and swelling had increased. The redness and swelling at this time had extended from the neighborhood of the crust over the entire anterior portion of the neck, and on the right side had passed over the clavicle and ended in a sharp line over the deltoid muscle and the first intercostal space. The redness was in all respects like that seen in erysipelas; the swollen part was doughy, with no sense of fluctuation, and in it at certain points could be felt hard bodies, which were, apparently, swollen lymphatic glands. These hard spots were especially noticeable beneath the sterno-cleido-mastoid muscle. The patient was in full possession of his faculties, and complained of nothing except pain in the inflamed portion of his neck and upon moving his head. The temperature was 39.3°. The appearance of the patient gave rise to a suspicion that the wound was due to infection; but the most careful inquiries were all met with a negative answer. The following day the temperature rose to 39.7°; the redness extended itself farther outward and downward on the right side, the patient complained of thirst and difficulty in swallowing, and the mucous membrane of the pharynx was found to be uniformly livid and swollen.

On the 3d of the month the evening temperature was 37°, and the redness and swelling became a little less marked. The patient, however, showed symptoms of asphyxia, became cyanotic, and died.

The autopsy was made on the 5th. The entire connective tissue of the neck was soaked in reddish serum. This œdema followed the trachea into the mediastinum, and could be seen along the bronchial tubes and over the pericardium. It followed, too, the œsophagus, and was seen upon the mesentery. Wherever this œdema was seen, the lymphatic glands were found to be swollen, in some cases to the size of a walnut, and they were so full of dark blood that they presented a striking resemblance to clots of that fluid.

After the diagnosis had been established by the post-mortem appearances, an attempt was made to clear up the etiology of the affection, and it was found that the deceased had been employed in the shop in sorting the hair taken from the cushions of old railroad-cars. New hair, which had been previously disinfected by boiling, was mixed with the old, and it is a question, of course, as to which contained the virus whence the infection came. The infected spot on the chin may have been due to a direct contact of the hair with that part, or, as is more probable, to the inoculation of virus from the fingers by scratching.

The second case occurred in a nurse, aged 36, who up to the time of this attack had been a healthy man. He sewed up the wounds in the body of the former patient which were made at the post-mortem, and seven days later, on the 12th of February, he first felt that he was ill, and on the 13th he was admitted into the hospital. Dr. F. saw him on the 14th and 15th of the same month, and then noticed some small fissures of the skin between the fingers of the left hand, together with

red streaks along the course of the lymphatics in the arm, enlargement of the axillary glands of the same side, and redness in the axilla of the opposite side. On the 15th, asphyxia and cyanosis came on, and on the afternoon of the same day he died, in full possession of his faculties. The symptoms were very similar to those of the former case, the temperature rising to 40.6° on the evening of the 13th, and falling on the 15th to 36°. The thirst, too, was intense, and during the existence of the cyanosis and asphyxia the sounds of the heart were heard with difficulty. The origin of the infection in this case was the body of the previous patient, and the infection must have taken place on the 5th or 6th of the month, so that there was a period of incubation of either six or seven days. The usual localization of the contagion of malignant pustule was not found in this case. There was no œdema nor carbuncle at the point at which the infection took place. If the redness along the lymphatics of the arm had not been seen, there would have been no means of finding out by what channel the infection had taken place, and the case might have been looked upon as one not due to infection from without. The local absorption, however, was most distinctly manifested by the inflammation of the lymphatic vessels, even if carbuncle and œdema were absent.

W. A.

DEVELOPMENT OF CANCER OF THE KIDNEY FROM THE EPITHELIUM OF THE RENAL TUBULES.—Pereverseff (*Centralblatt für Med. Wissenschaften*) reports a case of cancer of the kidney, in which the parenchyma of the right kidney, while keeping its normal form and size, was infiltrated by cancerous masses, which in the lower half were thickly pressed together, while in the upper part of the organ they were arranged along the edge of the medullary portion. The cancerous affection involved also the sacro-lumbar lymphatic glands, the omentum, pancreas, liver, etc. In the kidney the beginning of the process could be seen in a noticeable hyperplasia of the epithelial cells, with an increase of the nuclei, and protoplasm and a progressive proliferation of the cells, so that finally the entire calibre of the renal tubules was filled by them, and the tunica propria, which could be distinctly recognized, was thrust forward at many points. The forms of the cells became more varied as their number increased. These changes were not uniform in all the tubules of the same region, and not even at all portions of the same tubule, so that sometimes portions were found intact, while adjacent to them were others in which the cancerous degeneration was fully advanced. No new growth of connective tissue could be found, so that the stroma of the cancer was furnished entirely by the tunica propria and the small amount of connective tissue beneath it. It was only in large masses of degenerated tissue in which no normal renal elements were to be found that there was any interstitial connective-tissue growth, and when here seen it had taken on a cicatricial appearance. Here, too, were seen spindle-formed cancer-cells in connective tissue, but no evidence of a transition from connective tissue into cancer-cells was found. Many of the tubules were not involved in the cancerous degeneration, but were simply atrophied. Both in the uninjured tubules and in those which had undergone degeneration were found hyaline cylinders, and in the right kidney many of the corpuscles of Malpighi had undergone amyloid degeneration, while in the left this was not found to be the case.

W. A.

FUNGUS ORIGIN OF ERYSIPELAS.—Dr. Wladimir Lukomsky publishes in *Virchow's Archiv*, 60ten Bd., 3tes u. 4tes Heft, the results of certain researches on the origin and nature of the poison of erysipelas.

After some preliminary remarks on various modern views of the affection, Dr. L. gives notes of two series

of cases, as well as of experiments made upon animals, etc.

His conclusions from the first series are as follows. "The following facts," he says, "are established:—1. The conclusions of other authors are confirmed, that severe and rapidly-spreading phlegmonous inflammation of the subcutaneous connective tissue, in which the cutis also takes a decided part, may be developed by the hypodermic injection of fluids containing organic germs.

2. The micrococci multiply rapidly in the connective tissue, and spread principally through the serous canals and lymphatic vessels.

3. This inflammatory process may be brought about by a fluid containing organic germs which at the same time shows no signs of putridity, as, for instance, fluids taken from living individuals. It follows from this that the existence of organic germs cannot in any way be regarded as a criterion of putridity.

4. Putrid (dead) fluids which do not contain micrococci and bacteria are not in themselves sufficient to bring about anything more than a local inflammation, which has no disposition to spread farther.

5. The contents of erysipelatous blebs free from organic germs cannot cause, where subcutaneously injected, any symptoms of disease.

From his second series of experiments Dr. Lukomsky draws the following conclusions:

1. Putrefying materials containing organic forms being placed in contact with a wound immediately bring about severe local inflammation, which may also comprehend the surrounding skin. This wandering disease-process cannot be distinguished in its general symptoms from the so-called erysipelas occurring in human beings.

2. The micrococci and bacteria penetrate the connective tissue by means of the serous canals, and wander by these paths still farther.

3. They are found especially in the peripheric portions of the localized inflammation, and more particularly just where the inflammatory process is making most rapid progress.

4. Erysipelas moves preferably in certain directions. When, for instance, the wound in these investigations on animals lies in the middle line of the back or in its immediate neighborhood, the process spreads with equal rapidity on one side and on the other towards the abdomen, more slowly behind, and still more slowly forward.

A. V. H.

EPIDERMIC GRAFTS FROM THE SKIN OF THE RABBIT.—*L'Abeille Médicale*, No. 17, August, 1874, contains an article on this subject extracted from the *Rev. Méd. de l'Est*. After stating the fact that animal grafts are practicable, and giving various synonyms for the term "graft," the writer gives the following "precautions for conveniently performing transplantation:—"

1. If the borders of the ulcer are thick and the surface suppurates abundantly, they can scarcely be expected to heal. It is necessary, therefore, to alter the condition of the sore. For some days alcoholic washes should be used, and the dressing should contain glycerin. Transplantation should not be resorted to until the surface of implantation is covered with firm granulations and even a little dry.

2. Preparation of the grafts. A healthy rabbit should have a small portion of the skin of the back carefully shaved off at some point where the hair has been previously removed with sulpho-sulphuret of calcium. The fragment removed should contain a portion of the dermis and epidermis alone.

3. The fresh fragment should be transported to a portion of the sore previously designated, and which should be prepared by a few small incisions with a bistoury.

4. The fragment of epidermis should be fixed in its place by small strips of oiled paper, the ends of which extending beyond the edge of the sore are fixed by means of collodion. The wound should then be covered with a piece of linen soaked in glycerin and fenestrated; over this a compress of charpie, also soaked in glycerin or glycerole of starch, and a bandage over the whole. Collodion may be used to aid in fixing the bandage. The importance of using every means to prevent the graft from slipping is easily understood.

5. If the wound is in good condition, and but little suppuration is taking place, the dressing need not be removed for forty-eight hours. If, on the contrary, a certain amount of pus continues to be formed in spite of the precautions taken, the dressing should be changed at the end of twenty-four hours. If the fragment becomes fixed, it is slowly transformed, the pigment disappears, the animal epidermis is gradually dissolved, and there remains a mucous surface which easily cicatrizes.

The cicatrix thus obtained has remarkable vitality, and presents a much better appearance than cicatrices obtained by other means.

The writer concludes by remarking that there results from the facts stated the following:

1. Transplantation of epidermis from the rabbit to man can be performed with success.

2. In order that cicatrization shall take place, it is necessary that the graft shall be perfectly fixed. The operation then goes on from a centre of new tissue within the sore, which becomes a centre of cicatrization.

As soon as the extraneous integument once becomes firmly fixed, its pigment disappears, its epidermis disappears, and its cicatrix is from that time part and parcel of the human tissues. A. V. H.

CASE OF POISONING BY DIGITALIN.—Dr. Maguire writes a letter to the *Gaz. Hebdomadaire*, July 24, 1874, giving a case of accidental poisoning by this drug. The case was that of a woman suffering from some affection of the heart, for whom he had prescribed a granule of digitalin every evening.

The patient took it upon herself to swallow a *pinch* of granules,—an amount equal to one-fourth grain. In a few moments she was attacked by extreme præcordial anxiety, cold perspiration, nausea; finally, at three o'clock in the morning (six hours later) she vomited a small quantity of greenish, glairy matter, and experienced severe pain in the region of the stomach. Examined at eight o'clock the next morning, the præcordial anxiety had increased, and the vomiting was recommenced as soon as any liquid was taken into the stomach. The pulse was 90, and full, the action of the heart rhythmical and strongly accentuated, the face pale, the pupils normal, no headache, but cold perspiration, general malaise, bitter taste in the mouth; finally, the patient urinated very abundantly, without pain in the renal region; she preserved perfect consciousness. A cup of coffee containing a pinch of tannic acid was immediately administered. At eleven o'clock in the morning—that is, fourteen hours after the ingestion of the poison—the patient was seized with atrocious cramps in the thighs, calves, and feet; these pains returned every fifteen minutes; the pulse beat 104, full, regular, without intermissions. At 5 P.M. the pulse was 60, somewhat irregular: the face was injected, feebleness extreme, vomiting less frequent, pain diminished, tongue dry. The urine, which had been secreted very abundantly during the day, became entirely suppressed the following night. A little milk and soup were given, and were retained by the stomach. During the next day the patient's condition gradually improved; by night the pulse beat 72, rarely intermittent. In the

course of the following day all symptoms improved, the bitter taste in the mouth and the extreme feebleness alone being persistent for some time. A. V. H.

WOUNDS OF THE HEART.—F. Steudener (*Berliner Klin. Wochenschrift*, 1874, No. 7) had the opportunity of making a post-mortem examination of the body of a suicide who shot himself just beneath the left nipple. The ball, which was small, entered the muscular tissue of the heart, but did not pass entirely through it. Death followed from exhaustion fifteen weeks after the attempt at suicide was made. After inflicting the wound, the patient fell to the ground, but retained consciousness. Soon afterwards, it was noticed that there was both sensory and motor paralysis of the lower extremities. Physical examination of the heart showed that the area of dulness was normal, and also revealed the existence of an indistinct murmur, which upon the following day was found to be a friction-sound indicative of pericarditis. Pneumothorax of the left side was also present, which had forced the heart over towards the right side; the pulse was rapid and small; and below the navel there was complete loss of sensibility, with paralysis of the bladder and rectum. During the three following days the symptoms became more marked, and then as the wound began to heal they became less marked, but the paralysis continued, and a bed-sore which rapidly spread made its appearance. Upon examination of the body after death, the diminution in size of the muscles which had not been paralyzed, as compared with the increase of those paralyzed through fatty degeneration, was quite marked. The lungs were found to contain air, and there were cicatricial pleuritic adhesions and contractions of the upper lobes. The heart was somewhat hypertrophied, and at all points attached to the pericardium by fine fibres of connective tissue. On the left ventricle was found a furrow two centimetres in breadth, filled with connective tissue which started at the apex of the heart, and beneath this cicatricial tissue the muscle of the heart was but 1.5 mm. in thickness. The beginning and end of this track of connective tissue corresponded to perforations in the pericardium, in the neighborhood of which were found grains of powder. The spinal column was entirely severed between the tenth and eleventh thoracic vertebræ, and the ball was found in the right side of a vertebra. Both portions of the vertebral column were joined by bands of connective tissue; the lower segment was softer than the upper, and the gray substance could be but indistinctly seen. W. A.

THE TREATMENT OF VENEREAL BUBOES.—Sauszinski (*Centralblatt für Chirurgie*, No. 6, 1874) has adopted the method of opening buboes by a small perforation, as was advised by Ricord and later by Zeissl, and has tried it in eighty-two cases of this complication of venereal disease. The bubo is opened with a narrow bistoury, the pus is pressed out through the wound, and it is then dressed with a graduated compress moistened with lead-water, over which a small sack filled with sand is laid. The whole dressing is then fastened by means of a Spica bandage, and the patient is confined to his bed for the first few days. At first the compress is renewed twice during the day, but later, when suppuration has diminished, only once, the wound being washed with warm water at each dressing. The sack of sand is used until the edges of the wound become attached to the tissues beneath, when the dressing is changed to charpie and adhesive strips. The advantages claimed for this method of treatment over that by free incision are that the risks of having distinctive ulcerative processes in the wound are much less, and the time needed for its closure is shortened from forty-nine to twenty-eight days. W. A.

PHILADELPHIA MEDICAL TIMES.

A WEEKLY JOURNAL OF

MEDICAL AND SURGICAL SCIENCE.

The Philadelphia Medical Times is an independent journal, devoted to no ends or interests whatever but those common to all who cultivate the science of medicine. Its columns are open to all those who wish to express their views on any subject coming within its legitimate sphere.

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SATURDAY, SEPTEMBER 19, 1874.

EDITORIAL.

PROF. JEFFRIES WYMAN.

THE news of the death of Prof. Jeffries Wyman will be received with great sorrow. He represented a type of intellect so rare, produced such excellent results, influenced for good so much that is best among the works of the younger anatomists, and withal bore his great faculties so meekly, that he was justly esteemed as one of the foremost of men.

Everything that he did wore the impress of a strong individuality. None of his memoirs are of great length, but they embraced an unusual variety of subjects. His style was clear, and therefore attractive, and his matter as remarkable for what it suggested as for what it directly taught. He anticipated in his paper on "Spontaneous Generation" the brilliant labors of Bastian; he was the first to invite attention to the plan of arrangement of the cancelli of bone, antedating Wolfermann by many years; he exploded the notion of the mathematical value of the cells of the honey-comb; he derived results of exact value from the difficult field of intermembral homologies and antero-posterior symmetry. He also contributed a valuable memoir on the asymmetry of the human cranium, was the first to draw attention to the curious flattening of the tibia of North American Indians, and also gave the original description of the skeleton of the gorilla. He added to our knowledge of embryology and the anatomy of the nervous system in two of his most elaborate papers.

As an example of the accuracy of his information, we may mention the service he rendered in the famous Webster-Parkman case. It will be remembered that portions of the body of the murdered man had been mutilated and burned. The débris containing the suspected remains were given to Prof. Wyman for examination, who, in his report, accurately placed and described twelve minute fragments of the skull, with some portion of the trunk and the extremities. It is said that at one time a favorite amusement of his was to exercise his skill in identification by restoring in position the fragments of a bone he had previously comminuted.

Prof. Wyman's powers of work had been seriously impaired by the encroachments of consumption,—the disease of which he died. He had been compelled for several years to live in Florida during the winters, but not to rest, for his pen during these enforced visits was active in describing the shell-heaps of that section of the country. From the examination of some of these he deduced—chiefly by the condition in which human bones were found—that cannibalism must have been a long-standing custom among the aborigines frequenting the mounds.

In more than one respect Prof. Wyman resembled John Goodsir. He had the same splendid power of patient observation conjoined to the rare faculty of happy and profound speculation. He resembled him also in temperament, and—may we add?—in the somewhat desultory character of his work and carelessness of his own claims. We hope that Prof. Wilder—Wyman's best-known pupil—will do for his preceptor what has been done for Goodsir,—collect and edit the memoirs of this great and good man.

PHILADELPHIA HOSPITAL.

AS most of our readers know, we have time and again denounced this institution as entirely behind the requirements of the age. We have also stated that the Board of Guardians, in our opinion, did what they could with the amount of money at their disposal; that the fault of the managing board was not in maladministration of their trust, but in that they did not lay open the hidden places of the institution under their charge, and appeal to Councils and citizens for sufficient money to place the hospital upon a proper footing.

Within the last two years the composition of the governing board has been materially altered, and we are glad to be able to bestow a meed of praise upon it and upon the steward which it has chosen.

It is true that little has yet been actually accomplished; but there are indications of a better spirit and of a determination to improve the condition of affairs. The pride of the old board appeared to be to demonstrate how cheaply they could run the hospital; the new board seem to recognize the fact that there is something of more value than money. The present steward, Major Phipps, appears to be alive to the needs of the place, and to be anxious to do what is right in the matter. In his annual report just received he points out things which ought to be altered and improved, although the expense would be heavy,—confessing tacitly the great and pressing need there is of change. The Receiving Ward has long been a horrible place, and we learn that the board is to meet the Council Committee of Finance to obtain an appropriation with which to build a new one. We are both glad and sorry for this: glad, because it indicates a right spirit in the ruling board, and because the need of a *temporary* structure as a present relief is so great; sorry, lest so large an amount of money should be spent as to add new strength to the accursed union of the living and the dead, of the unfortunate sick and the pauper.

Will patching make the garment of a century ago a thing of beauty or of service? The whole plan upon which the almshouse exists is cruelly wrong, unjust, and unjustifiable, even by the merest motives of policy. Even the ambulance system recently inaugurated is, from its association, a curse rather than a blessing. A stranger is hurt in the streets of the city; the telegraph summons aid; he is borne by the ambulance to—where? To a ward filled with paupers, to a bed prepared by paupers, to the improper association, nursing, and food, with all the other inconveniences necessarily connected with an institution whose attendants are chiefly chosen from the ranks of paupers. Think of a city like Philadelphia herding the honest poor in their hour of sickness with the pauper and the outcast! A city of nearly a million of inhabitants with no municipal hospital, save as a department of its almshouse! No, gentlemen of the Board of Guardians, however honestly you strive, whatever minor reforms you institute, your work will be as naught, and the responsibility of human demoralization, if not of human life, will be upon you, unless you boldly place the truth before the community, and tell this city, which can spend millions upon its pleasure-bridges, that its charity fails in the fountain-head, and that its municipal hospital, which ought to be the chiefest of its jewels, is to-day a by-word of reproach, a fountain of demoralization and disgrace.

CORRESPONDENCE.

TRANSACTIONS OF THE NEW YORK SOCIETIES.

AT the meeting of the New York Neurological Society, held September 7, Clinton Wagner, M.D., read a paper on "Certain Nervous Diseases of the Throat."

After mentioning several cases occurring in his own practice, he enumerated as the causes of functional loss or impairment of the voice—hysteria; violent mental action from fright, joy, or grief; general debility; catarrh; overstraining of the voice in singing, loud talking, or prolonged exertion; reflex action; mechanical causes; poison: each of which was carefully reviewed.

In the way of treatment, he said that in simple, uncomplicated functional aphonia or dysphonia, local remedies which bring about a reflex contraction of the muscles of the larynx concerned in voice-production will be found in many cases all that is necessary. Particularly is this the case in aphonia of hysteria. Electricity applied directly to the vocal cords in this variety rarely fails to restore the voice.

Lotions of nitrate of silver, perchloride of iron, cupri sulph., zinci sulph., varying in strength from half a drachm to two drachms to the ounce, applied with a brush or inhalations of the same through the steam atomizer, or in the form of spray produced by compressed air, through Sass's tubes, are very useful in cases in which there is congestion of the mucous membrane of the cords and adjacent parts. Vapor inhalations of the *ol. fol. pini sylvestris*, creasote, or *ol. junip. anglici*, are serviceable in cases of dysphonia from a relaxed condition of the vocal cords.

Where the aphonia depends upon or exists in connection with an inflamed condition of the mucous membrane of the larynx, the remedies enumerated above should be employed; but if that condition does not exist, the sheet-anchor in the treatment is electricity, and time is lost by resorting to other means of treatment. This agent is not a new one in treating aphonia. In 1800, Grafengiesen, of Berlin, applied it to the neck; but Mackenzie has the credit of having first applied it to the mucous membrane of the larynx over the paralyzed muscle. In using it, a band is fastened around the neck, to which one pole is attached over the thyroid cartilage; the other pole is fastened to a metallic sound, bent at the proper curve, and passed over the epiglottis into the larynx by the aid of the laryngoscope. It is immaterial whether the negative or the positive pole is introduced into the larynx.

The constant current is generally employed, from a twenty-cell battery. Never more than from four to eight cells are used for internal applications. In cases of long standing the interrupted current is sometimes employed by the essayist, and in such cases more decided results have been obtained than from the constant current, probably owing to the greater muscular excitation produced. As regards pain, the patients complain that the constant current is more severe.

Other means of treatment have been tried with success. Burns has cured cases by introducing a mirror, and causing the patient to utter vowel-sounds, and then combining them with consonants.

In regard to the early treatment of impairment of the voice occurring in singers and public speakers, the physician should insist above all things upon absolute rest of voice for weeks or even months; at the same time employing locally the mild astringents to relieve the congestion, after which the constant current.

In laryngeal neuralgia, which is occasionally met with as a true neurosis and independent of any other morbid process in the same individual, the treatment which Dr. Wagner has found most useful has been large doses of the tincture of iron and quinine, and insufflation of tannic acid and morphia into the larynx. Aconite liniment over the seat of pain gives temporary relief. Hypodermic injections of morphia are useful. Electricity in the form of the faradic current has had the effect of increasing the pain, from the muscular excitation it produces; and the constant current has failed to give the relief claimed for it by others who have used it. In nervous sore throat, an affection difficult to diagnosticate and still more so to treat satisfactorily, local applications of iron in the form of spray, and morphia applied with a brush, gave great relief. It sometimes accompanies hysteria, in which case the general health must be improved by tonics, generous diet, and change of air. If the patient has lived in the damp sea-air of the coast, a change to a dry, mountainous region will be found beneficial, and *vice versa*. Local applications should be of a mild, soothing character. Much benefit in the hands of the essayist has been derived from morph. sulph., gr. vi to $\frac{3}{4}$ i aqueæ, applied by means of the brush to the parts complained of; also, sprays of the same, or weak solutions of zinc or iron. W.

NEW YORK, Sept. 8, 1874.

MEETING OF THE BRITISH MEDICAL ASSOCIATION.

NORWICH, ENGLAND.

TO THE EDITOR OF THE PHILADELPHIA MEDICAL TIMES:

DEAR SIR,—On the third day of the meeting of the Association, Mr. Lund, of the Royal Infirmary of Manchester, read before the Surgical Section an interesting paper on "Incision *versus* Excision of the Knee-Joint in Children." He presented his plan of dividing subcutaneously, and under antiseptic influence, the inter-articular ligaments of the joint, with peculiar hook-like knives, and following the operation by extension of the limb, in certain cases ordinarily submitted to excision.

Mr. Lund also showed in the Museum of the Association a number of ingenious appliances for the treatment of joint-disease and for other surgical uses.

In the Section on Public Medicine, its President, W. H. Michael, Esq., barrister-at-law, said that "public medicine, which might be taken to include any medical

service paid for out of funds raised by taxation or rates, must of necessity have to deal with other phases of medical practice than those within the sphere of the private medical practitioner, so called.

"There was a misconception on the part of some friends of sanitary effort tending in a direction more dangerous to progress than absolute opposition. It was asserted as probable that by preventive medicine we might indeed save life, but that we saved only the lowest, least valuable, and most imbecile form of it, and this tended to the degeneration, while we added to the number of the population. Nothing could be more fallacious, or, if unanswered, would completely while insidiously check and paralyze sanitary action. It was attributed to the late illustrious Professor Liebig that he enunciated the axiom that disease began where resistance ended; and if so, this sentence contained the germ of the error into which writers like Kingsley and Herbert Spencer had fallen when writing on the subject of public health. The real fact was that sanitary measures would tend to perpetuate a race endowed with greater power and vitality than that of any preceding age. Besides this, it must be borne in mind that it was not the weak, the decrepit, and the infirm who were always the victims of zymotic or preventible diseases, seeing that there were whole classes of those diseases which especially selected for their victims those who were in the prime of life,—the strong, the active, and the robust."

On the same subject, at the general meeting, Dr. Rumsey presented a draft of a report of the State Medical Qualification Committee, which recommends the establishment in each division of the kingdom of a uniform qualification in state medicine, to be held in future, besides the license to practise, by all persons before they are elected to hold any public medical office the salary of which is paid out of rates or taxes.

Dr. Sims delivered an address on the subject of the management of the pedicle in ovariectomy, recanting some of the objections he formerly made to the use of the clamp, and stating his present practice of using a very simple and readily extemporized clamp of thick iron wire, adjusted on the pedicle under tension of an écraseur.

Mr. Cadge, of the Norwich Hospital, delivered an excellent address before the Surgical Section on the subject of urinary calculus, particularly in reference to the extraordinary prevalence of the affection in that particular part of the country, and which is greater than in any other region in the world. I was particularly impressed with his reference to such factors in the tendency to calculus as the use of water impregnated with lime, in combination with the habits of the people in consuming food of a character likely to produce indigestion. He spoke of the common diet of boiled dough in the form of greasy dumplings or puddings, with sour beer as a beverage. I thought of somewhat similar influences that exist in some limestone regions of America where calculus is very prevalent, such as the diet of heavy, sodden, and doughy bread, and the greasy

and indigestible products of the inevitable frying-pan, which are notoriously productive of indigestion of an acid form. Mr. Cadge has *never seen calculus among children who were fed on a proper milk-diet*, and he accounted for the comparative exemption of Irish and Scotch children by their universal consumption of such food.

During the continuance of the meeting, some French physicians attempted to give demonstrations of the antagonism of alcohol and absinthe, by injecting those substances alternately into the veins of animals. The demonstration, although not carried out to the extent contemplated, was quite clear; but the necessary vivisections led to much excitement and violent opposition, that brought the affair to a sudden conclusion. The incisions made to expose the femoral vein and to prepare it for the injection were made without anæsthesia, and were done in an unsurgical and bungling manner. It may have been essential for proper success of the experiments to avoid the impression of anæsthesia on the nervous system of the animals, but it does seem practicable that the operations of exposing the vessels might have been previously performed under anæsthetics, thus allowing full time for recovery from their influence before the physiological experiments were made. The opposition to the vivisections, which were performed in a small room adjoining that of the general meeting, became violent and turbulent, especially under the influence of some excited citizens of the place who had made their way into the room.

One dog had been sacrificed to the toxic injection, and another was recovering under the antidotal influence of an antagonistic remedy, when the proceedings were suddenly concluded, and some previously-condemned cats were literally "let out of the bag." The sentiment was freely expressed that vivisection without anæsthesia for scientific *investigation* may be proper, but for the mere *demonstration of known facts* will not be tolerated by the profession. Such views may not be in accordance with "the way they do things in France," but the general impression of those present evinced the conviction that science and humanity should work in harmony.

Mr. Croft, of St. Thomas's Hospital, London, presented the subject of "Sub-periosteal Excision of the Hip-Joint," after the general manner of Dr. Sayre, of New York, and which that surgeon had introduced into European practice.

Dr. J. Marion Sims, of New York, spoke of his experience of the subject from his observation of operations performed by Dr. Sayre, and of the excellent results obtained.

Dr. Sims made the following remarks on Nélaton's method of resuscitation from chloroform-narcosis:

"Dr. Charles James Campbell, the distinguished accoucheur of Paris, has recently written two papers on anæsthesia in obstetrics,* in which he ably sustains the views long taught by Nélaton, that death from chloro-

form is due to syncope or cerebral anæmia. And, among other strong arguments to prove his position, he gave a graphic description of a case of chloroform-narcosis which occurred in my practice in Paris, where M. Nélaton, by his method, unquestionably saved the life of the patient. She was young, beautiful, and accomplished, and belonged to one of the oldest and best families in France. Married at twenty, she gave birth to her first child a year afterwards. The head was enormous (hydrocephalic), impacted in the pelvis nearly twenty-four hours, and the delivery of a dead child was ultimately accomplished with instruments. Dr. Bouchacour, of Lyons, was called in consultation, and applied the forceps. In a week afterwards, the urine began to dribble away, and in a fortnight an immense slough was thrown off. The case, surgically considered, was one of the most interesting I ever saw, and the operation was one of the most difficult I ever performed on any one in her station in life. The base of the bladder was destroyed, and the fundus fell through the fistulous opening: it was therefore inverted and protruded between the labia majora as a herniary mass of the size of an apricot, its external covering being the internal or lining membrane of the bladder, which was of a deep vermilion-red color. The vaginal portion of the cervix uteri and the posterior cul-de-sac were destroyed; and by the reparative process the cervix and the posterior wall of the vagina were blended into one common cicatricial mass, which was firm, inelastic, and immovable. The case appeared desperate, and M. Nélaton had pronounced it incurable. A preparatory operation was necessary,—viz., to open the cervix uteri by dissecting it from the posterior wall of the vagina, and thus to reconstitute the canal of the vagina up to the canal of the cervix, and by a subsequent operation to draw forward the flap thus formed, secure it to the neck of the bladder anteriorly, and thereby close the fistula. The first or preparatory operation was performed at the country-house of the family, near Dijon, on November 3, 1861, Dr. Dugast, of Dijon, assisting, and giving chloroform. The second, or operation for the radical cure, was performed on the 19th of the month, at St.-Germain, about an hour's distance from Paris by rail. M. Nélaton, Dr. Campbell, Dr. Beylard, Dr. Johnston, and Mr. (now Dr.) Alan Herbert, were present. I seldom give an anæsthetic in private practice for operation on the walls of the vagina, as the pain is generally not sufficient to call for it. But in this case, as the slightest touch was unbearable, an anæsthetic was indispensable. Dr. Campbell was selected by the family, as well as by M. Nélaton and myself, to administer the chloroform, especially as he was in the daily habit of giving it in his large obstetrical practice, and we all had entire confidence in his caution, skill, and judgment. The patient was soon anæsthetized. The operation was begun at 10 A.M., and I thought it would require about an hour to finish it.

"Many years ago I imbibed the convictions of my countrymen against chloroform in general surgery, and have always used ether in preference, never feeling the

* 1. Mémoire sur l'Anesthésie obstétricale; 2. Etude sur la Tolérance anesthésique obstétricale, par le Dr. Charles James Campbell, ancien Interne de la Maternité de Paris, ancien Chef de Clinique obstétricale de la Faculté de Paris. G. Masson. 1874.

least dread of danger from it under any circumstances. It is otherwise with chloroform; and in this particular case I felt the greatest anxiety, frequently stopping during the operation to ask Dr. Campbell if all was going on well with the patient. At the end of forty minutes the sutures (twelve or thirteen) were all placed, and ready to be secured, and I was secretly congratulating myself that the operation would be finished in a few minutes more, when all at once I discovered an unusual bluish livid appearance of the vagina, as if the blood were stagnant, and I called Dr. Johnston's attention to it. As this lividity seemed to increase, I felt rather uneasy about it, and I asked Dr. Campbell if all was right with the pulse. He replied, 'All right; go on.' Scarcely were these words uttered, when he suddenly cried out, 'Stop! stop! No pulse, no breathing;' and, looking to M. Nélaton, he said, 'Tête en bas, n'est-ce pas?' Nélaton replied, 'Certainly; there is nothing else to do.' Immediately the body was inverted, the head hanging down, while the heels were raised high in the air by Dr. Johnston, the legs resting one on each of his shoulders. Dr. Campbell supported the thorax. Mr. Herbert was sent to an adjoining room for a spoon, with the handle of which the jaws were held open, and I handed M. Nélaton a tenaculum, which he hooked into the tongue and gave in charge to Mr. Herbert; while to Dr. Beylard was assigned the duty of making efforts at artificial respiration, by pressure alternately on the thorax and abdomen. M. Nélaton ordered and overlooked every movement, while I stood aloof and watched the proceedings with, of course, the most intense anxiety. They held the patient in this inverted position for a long time, before there was any manifestation of returning life. Dr. Campbell in his report says it was fifteen minutes, and that it seemed an age. My notes of the case, written a few hours afterwards, make it twenty minutes. Be this as it may, the time was so long that I thought it useless to make any further efforts, and I said, 'Gentlemen, she is certainly dead, and you might as well let her alone.' But the great and good Nélaton never lost hope, and by his quiet, cool, brave manner he seemed to infuse his spirit into his aids. At last there was a feeble inspiration, and after a long time another, and by-and-by another; and then the breathing became pretty regular, and Dr. Campbell said, 'The pulse returns, thank God; she will soon be all right again.' Dr. Beylard, who always sees the cheerful side of everything in life, was disposed to laugh at the fear I manifested for the safety of our patient. I must confess that never before or since have I felt such a grave responsibility. When the pulse and respiration were well re-established, M. Nélaton ordered the patient to be laid on the table. This was done gently. But what was our horror when at the moment the body was placed horizontally the pulse and breathing instantly ceased! Quick as thought the body was again inverted, the head downwards and the feet over Dr. Johnston's shoulders, and the same manœuvres as before were put in execution. Dr. Campbell thinks it did not take

such a long time to re-establish the action of the lungs and heart as in the first instance. It may have lacked a few seconds of the time; but it seemed to me to be quite as long; for the same tedious, painful, protracted, and anxious efforts were made as before, and she seemed, if possible, more dead than before; but, thanks to the brave men who had her in charge, feeble signs of returning life eventually made their appearance. Respiration was at first irregular and at long intervals; soon it became more regular, and the pulse could then be counted; but it was very feeble and would intermit. I began again to be hopeful, and even dared to think that at last there was an end of this dreadful suspense, when they laid her horizontally on the table again, saying, 'She is all right this time.' To witness two such painful scenes of danger to a young and valuable life, and to experience such agony of anxiety, produced a tension of heart and mind and soul that cannot be imagined. What, then, must have been our dismay, our feeling of despair, when, incredible as it may seem, the moment the body was laid in the horizontal position again, the respiration ceased a third time, the pulse was gone, and she looked the perfect picture of death! Then I gave up all as lost; for I thought that the blood was so poisoned, so charged with chloroform, that it was no longer able to sustain life. But Nélaton, and Campbell, and Johnston, and Beylard, and Herbert, by a consentaneous effort, quickly inverted the body a third time, thus throwing all the blood possible to the brain, and again they began their efforts at artificial respiration. It seemed to me that she would never breathe again; but at last there was a spasmodic gasp, and after a long while there was another effort at inspiration, and after another long interval there was a third; they were 'far between;' then we watched, and waited, and wondered if there would ever be a fourth. At length it came, and more profoundly, and there was a long yawn, and the respiration became tolerably regular. Soon Dr. Beylard says, 'I feel the pulse again, but it is very weak.' Nélaton, after some moments, ejaculates, 'The color of the tongue and lips is more natural.' Campbell says, 'The vomiting is favorable; see, she moves her hands; she is pushing against me.' But I was by no means sure that these movements were not merely signs of the last death-struggle, and so I expressed myself. Presently Dr. Johnston said, 'See here, doctor; see how she kicks; she is coming round again;' and very soon they all said, 'She is safe at last.' I replied, 'For heaven's sake, keep her safe; I beg you will not put her on the table again till she is conscious.' This was the first and only suggestion I made during all these anxious moments, and it was acted upon; for she was held in the vertical position till she, in a manner, recovered semi-consciousness, opened her eyes, looked wildly around, and asked what was the matter. She was then, and not till then, laid on the table, and all present felt quite as solemn and as thankful as I did; and we all in turn grasped Nélaton's hand and thanked him for having saved the life of this lovely woman.

"In a few minutes more the operation was finished, but, of course, without chloroform. The sutures were quickly assorted and separately twisted, and the patient put to bed; and on the eighth day thereafter I had the happiness to remove the sutures in the presence of M. Nélaton, and to show him the success of the operation.

"I have detailed the circumstances of this interesting case at great length, because I believe it goes as far to establish a principle of treatment as any one case ever did, or possibly can."

"If the recovery had been complete and perfect with the first effort at reversing the body, there might have been a doubt whether the vertical position was really the cause of resuscitation; but when the horizontal position was again and again followed by a cessation of all evidence of life, and when life was again and again re-established by a position that favored only the gravitation of the blood (poisoned as it was) to the brain, the inference is very clear that death in such cases is due to syncope or cerebral anæmia. Exhaust the brain of blood in any way, and death follows. Fill it speedily with blood again, and life returns.

"I have another case to relate, which goes far to establish the principle of treatment in chloroform-narcosis so forcibly illustrated by the case at St.-Germain.

"In January, 1873, I amputated the cervix uteri at the Woman's Hospital, drew the vaginal tissue over the stump, and secured it by silver sutures. The junior house-surgeon gave the anæsthetic. When the operation was nearly finished, he cried out, 'The patient has stopped breathing,' and immediately added, 'She has no pulse.' As before stated, I always use ether as an anæsthetic, and could not realize the fact that my patient was in any danger whatever till I was told that they were giving her a mixture of chloroform and ether (one part to four) which some of the surgeons had been using a few days previously. On examining the patient, I found her, as it were, dead; there was not the slightest muscular rigidity; the arms and head fell by their own gravity in any way they were directed; the neck was as limber as if it were a mere band of soft linen stretching from the head to the trunk; there was not the least sign of breathing or of the pulse; she was, to all intents and purposes, dead; and I believe she would certainly have remained so if she had been left alone; and I doubt very much whether she could possibly have been resuscitated by any other method than that of Nélaton's.

"I quickly inverted the body, and had it held thus, and then I shook the thorax, agitating the head laterally, so as to add an impetus to the movement of the blood, which, with the body in this vertical position, would naturally gravitate towards the brain; the jaws were held asunder, and the tongue hooked with a tenaculum and pulled forward. In a few minutes the breathing was re-established, and then the pulse returned; and soon the patient was placed again on the table in the lateral semi-prone position in which all my operations on the uterus are performed; and the operation was finished, but without any more of the anæsthetic.

"These two cases comprise my personal experience with Nélaton's method in chloroform-narcosis.

"The *New Orleans Medical and Surgical Journal* for November, 1873, says, 'In the course of an extended experience in the administration of chloroform, it has happened three times to Dr. M. Schuppert that, to all appearances, the narcotized subject died,—that is, respiration ceased, the heart stopped beating, and muscular contractility became extinct. The method he adopted for resuscitating these patients consisted in reversing the body, either by hanging them up by the feet, or laying them over a bed or table, so that the greater part of the body with the head hung down. In that position artificial respiration was also tried. In one case five minutes elapsed before there was a natural inhalation. All of them recovered. Dr. Schuppert believes that in cases of death from chloroform the primary cause of the cessation of the respiration and circulation rests in anæmia of the brain, and not in impregnation of the blood with carbonic acid.'

"Another American authority, Dr. E. L. Holmes (*Chicago Medical Journal*, September, 1868), says that whenever there is any failure of the heart's action, as is nearly always the case, the body should be laid at an angle of 40°, with the head downwards, so as to favor the passage of arterialized blood to the brain.

"I take it for granted that Dr. Schuppert and Dr. Holmes must have obtained their knowledge of this method of resuscitation either directly or indirectly from the teachings of Nélaton; for he had for years been in the habit of explaining his method in his lectures and at his *cliniques*, and Dr. Johnston published an account of it in the American papers in 1861. Ten years ago there was a story prevalent in Paris that M. Nélaton had derived the hint of reversing the body in chloroform-poisoning from a discovery accidentally made by his little son, then some seven or eight years old; that the little boy had killed some mice with chloroform; that, without thought or reason, he had taken up a dead mouse by the tail, and was twirling it round, when, to his surprise, it began to manifest signs of life, and recovered entirely, while the mice left lying were dead; and that the great surgeon was thus taught a great lesson, if not by babes and sucklings, at least by a little boy. This is a very pretty story as it is, and it seems a pity to spoil it. A few days ago, when in Paris, I called to see young Nélaton (who is now a student of medicine, and will graduate next year), and I asked him for the facts of the mouse-story. He said that when they lived on the Quai Voltaire the house was infested with mice; that great numbers were caught in traps almost daily; that he was in the habit of killing them with chloroform by covering the trap with a napkin and pouring the chloroform on it; and that his only idea was that of an easy death for the mice. One day, when he had given a happy dispatch to some mice, his father accidentally came into the room, and, seeing the dead mice, he told his son if he would take up one by the tail and hold it with the head downwards, it would revive, while the others would not. He did this, and found it was

true. And he told me that he had, when a boy, performed the same experiment on mice some forty or fifty times or more, and always with the same unvarying result. He says that he has often heard his father speak not only of the case that occurred at St.-Germain, but of other cases that he had saved in the same way before the time of the mouse-story, which dates back to 1857 or 1858.

"As the facts now laid before you fully explain themselves, it is unnecessary for me to indulge in any lengthened remarks on the subject. In my own country the accoucheurs often use chloroform, and the surgeons mostly use ether. I believe there has not as yet been a single death from chloroform given during labor; while deaths from it in general surgery occur constantly and for unimportant operations. There must be a reason for this. I believe that it can be explained only on the theory that death from chloroform is, as a rule, due to syncope or cerebral anæmia. 'Now, we know that in active labor there can be no cerebral anæmia, for every pain throws the blood violently to the head, producing fulness and congestion of the blood-vessels, thereby counteracting the tendency of the chloroform to produce a contrary condition. It may be said that the recumbent position has some influence in determining the safety of chloroform in labor; and so it has; but it gives no immunity under other circumstances. Chloroform given intermittingly, as in labor, is thought to be less dangerous; but patients in labor are often kept for hours under its influence with safety, and occasionally it is necessary to produce complete and profound narcosis in some obstetrical operations; and yet I believe I can safely reiterate what I have already said, that no woman has as yet died in labor from the effects of this anæsthetic. In puerperal convulsions, where the brain is believed to be overcharged with blood,—and that, too, when the blood is known to be poisoned with urea,—we formerly bled the patient, and we do so now sometimes; but our chief remedy is chloroform, which acts by arresting spasmodic movements, and by producing that very state of cerebral anæmia so necessary to a successful result. Whether puerperal convulsions are less frequent in labors under chloroform than in those without it, I do not know.

"I believe that obstetrics may take a lesson from Nélaton's method of resuscitation, by adopting it in cases of threatened death from post-partum hemorrhage. Let us not be satisfied with simply placing the head low; but let us, in addition to the means usually adopted, invert the body, and throw what little blood there is left in it wholly to the brain. I have never seen a death from uterine hemorrhage; but, from recollections of the few alarming cases I have witnessed, I now feel sure that recovery might have been hastened if I had known of and adopted Nélaton's method of inversion.

"Whether death from chloroform is due to cerebral anæmia or not, it is at least safe to adopt Nélaton's method in all cases of supposed or threatened danger; but I think the safest plan is to relinquish the use of

chloroform altogether, except in obstetrics. The frequent cases of death from the use of chloroform in surgical operations that have occurred among us, even of late, should warn us to give up this dangerous agent, if we can find another that is as efficient and at the same time free from danger. Ether fulfils the indications to a remarkable degree; but, while it is safe, it is, unfortunately, unpleasant to the physician and bystanders, as well as to the patient. He who will give us an anæsthetic as pleasant to take as chloroform and as safe as ether will confer the greatest boon upon science and humanity."

R. J. LEVIS, M.D.

GLEANINGS FROM OUR EXCHANGES.

DIFFERENTIATION OF INTESTINAL INVAGINATION.—Dr. O. Leichtenstein, in an article on invagination (*Archiv f. Prakt. Heilk.*, 4, 1873), refers to the following points for the differentiation of invagination of the small from that of the large intestine: 1. Invagination of the small intestine but rarely occurs during the first year of life, as also rarely during childhood in general. 2. In adults, the course of the attack in invagination of the ileum is more rapid, the phenomena more severe, than in ileo-cæcal and colon invaginations. Chronic cases are rare in invaginations of the small intestine, more frequent in those of the ileo-cæcum and colon. Severe symptoms of collapse occur more frequently in the beginning of the disease. 3. Muco-sanguinolent discharges are the rule in all invaginations, whatever their seat. Fecal evacuations, entirely normal in character (after preceding diarrhoea), were observed in ileo-cæcal invaginations, once in a colon invagination, the patient being an adult. 4. Meteorism is a very variable symptom. It is usually absent in ileo-cæcal invaginations. In invaginations of the descending colon it was frequently recognized as affecting the transverse colon, and subsequently spread over the whole abdomen. In invagination of the ileum it was occasionally found to be confined principally to the central abdominal region, with exemption of the lateral portions and epigastrium. 5. Tenesmus is rare in invagination of the ileum, frequent in that of the colon and ileo-cæcum. 6. The tumor is usually absent in ileum invagination. Its seat in the centre of the hypogastrium speaks for this variety; when situated in the cæcal region, especially when it remains stationary for some time, it indicates ileum or ileo-cæcal invagination. The spread of the tumor, when occurring suddenly and corresponding to the course of the colon, speaks more for ileo-cæcal, less for colon invagination, and excludes ileum invagination. The seat of the tumor in the left lateral portions of the abdomen would indicate ileo-cæcal or colon invagination. The tumor can never be felt in the rectum, and prolapse through the latter never occurs in uncomplicated ileum invagination. Changes in the consistency, occurrence, and disappearance of the tumor were especially observed in ileo-cæcal invagination.—*New York Medical Journal*, Sept. 1874.

LUXATION OF THE TENDON OF THE TENSOR VAGINÆ FEMORIS.—Dr. Ardenet, of Foissac, reports the following case: He was recently consulted by a laborer, who stated that, while engaged in the field at labor which required great efforts on the part of the inferior extremities, he suddenly experienced an acute pain in the right knee. On examination, the most apparent symptom was the acuteness of the pain when the right leg was moved. The leg was flexed, and with some

difficulty the author succeeded in extending it. A small tumor was then found located behind and above the external condyle of the femur, which was very tender on pressure, and connected with a cord which extended downward and from within outward. The author thereupon made the diagnosis of luxation of the tensor of the fascia lata, produced by extraordinary muscular effort, and after several attempts succeeded in replacing it in its normal position. This was accomplished by exerting pressure from without inward with the thumb of the right hand while the left sustained the limb. As soon as the tendon recovered its normal position, anterior to the external condyle, the patient experienced complete relief and could walk without pain or difficulty, and on the following day returned to his customary duties.—*New York Medical Journal*, Sept. 1874; from *Journal de Thérap.*, 1874.

A HERMAPHRODITE.—The *London Lancet*, Aug. 22, 1874, gives the following account of an individual who appears to be a true hermaphrodite:

The breasts present all the characters of the female sex, so that the upper part of the trunk has quite a feminine appearance. The generative organs, on the other hand, constitute an apparatus composed of parts belonging to both sexes. It appears as if the right side belongs specially to the male (and it is to be noted that the right side of the face looks masculine as compared with the left). In the centre a rudimentary penis is observed, the glans of which is somewhat furrowed at its end. The urethra opens at the base of the penis, forming a scrotal slit, this disposition giving rise to a variety of hypospadias. The prepuce is largely developed, very loose, and bound with a thick indented ridge, as is seen in the nymphæ. On the right side is seen the scrotum containing one testicle, whilst none exists on the left. The whole scrotum looks much like the labia majora, and when the finger is introduced between the two pendent halves and under the penis, it finds a cavity much resembling the vagina, though ending in a cul-de-sac. A female catheter, introduced into the meatus, and pushed horizontally (when the individual is standing), comes probably against a rudimentary uterus. When the catheter is directed upwards, it passes into the bladder.

This individual regularly menstruated through the meatus urinarius up to the age of forty-four, so that it must be inferred that the ovaries are more than rudimentary. Doubts as to the reality of menstruation in this case were raised; but the testimony of Recklinghausen, Kölliker, and Scanzoni, who saw the function performed, is sufficient to settle the question. Hence we find, in the same being, the combination of the secreting organs belonging to both sexes. Spermatozoa have been found in the liquor seminis. The propensities of both sexes are thus observed in one being, and have, according to the individual's assertions, been satisfied.

INFLUENCE OF DIET UPON THE PROPORTION OF THE WHITE BLOOD-GLOBULES.—Wilbouchevich concludes as the result of several observations upon anæmic subjects that "a purely vegetable diet has an evident effect upon the proportion of the white blood-globules," increasing them from the normal proportion of one to six hundred red globules to one to sixty-six and one to one hundred and thirty-eight.—*Le Progrès Médical*, June 20.

UMBILICAL GONORRHEA.—A unique case of this singular malady is recorded in the *Gazzetta Medica Italiana*, from the *Giorn. Ital. delle Mal. Ven.* It occurred in a youth of 19, already laboring under ordinary gonorrhœa, and doubtless ensued from the contact of matter, and was removed by astringent solutions of the acetate of lead and sulphate of zinc.

NOTES AND QUERIES.

TO THE EDITOR OF THE PHILADELPHIA MEDICAL TIMES:

DEAR SIR,—The *Times* of August 29 contains an editorial entitled "Wanted,—Leaders for a New Crusade," in which I have been much interested, not only in the main point of the article, but in the side-issues raised "in passing."

Among them, the statement that "the time for the discussion of the subject of 'women-doctors' has gone by," that "the movement will stand or fall by its results before the *lay public*," seems to me a just and true one. The objection implied, rather than avowed, in your opening paragraph, viz., "Antipathy to the hard-featured, loud-tongued, masculine woman, fitted by nature for the platform and the hustings," is greatly weakened by the admission, also implied, in connection with the advocacy of female pharmacists. "No nightmare of Mrs. Partington's sweeping his sex from the old fields of labor breaks his rest; no vision of displacement haunts his day." Do the objections to "women-doctors," among those who have so long held "undisputed possession" of the labors and emoluments of the medical profession, rest upon what is believed to be their natural unfitness, or is it a question of rivalry and fear of being swept from the field, as the statements above quoted would seem to indicate?

The danger of a "square peg" forcing a round one from its occupancy of a "round hole" can never be imminent; in short, these various lines of argument prove too much, and "the conviction that woman was unfitted by nature for the positions into which she was being forced" does not seem to refer to the same woman who is "*fitted by nature* for the platform and the hustings."

I must confess to having laid down the article with a sense of confusion, perhaps due to the fact of not having been endowed by nature with "the coolest of heads and the calmest of nerves." However, having read other editorials from the same pen with great satisfaction, and with no disturbance of mental balance, I am convinced that the difficulty with the one under discussion is inherent in the subject,—a bad cause necessarily rendering a good argument impossible.

The association of ideas found in your allusion to "free love" seems to me an unfair one: as a medical woman, I protest against it. That a few of both men and women are found so lost to the feelings of true manhood and womanhood as to advocate the doctrine spoken of, must be a grief to all lovers of good order and morality. But women who are working quietly under the protection and warrant of a regularly-chartered institution, whose curriculum of study will stand comparison with that of any of the leading medical institutions of the land, are not to be even remotely associated, in spirit and motive, with the social "Bohemians" who hang upon the outskirts of "the extreme woman's-rights movement," the vitality of which you recognize; and, while you express a true appreciation of the causes of this vitality, I believe there is an element in it which you fail to recognize, viz., a determination on the part of woman to find food for the intellectual hunger which is her natural birth-right, and "to exercise the powers with which she has been endowed, in accordance with her own convictions and feelings."

Your want of faith in "the general adaptability of the sex to the calling of the physician" has a large foundation in fact, looking at the profession exclusively upon the side of its labors, its exposures, and its demands upon the physical and mental powers generally. But there is another side of medical professional life, often ignored in the discussion of this question. There is, if I mistake not, as frequent demand upon the physician for patience, gentleness, charitable judgment, and warm sympathy with suffering, for the insight which comes through those qualities generally conceded pre-eminently to woman, as for the sterner traits justly attributed to man. Human nature includes the two phases, male and female; and I believe that the medical profession more perhaps than any other, certainly not less than the long-conceded fields of teaching, literature, and art, has room for both men and women; and, while a large part of its work may undoubtedly be done equally well by either, there is much in it that neither can do as successfully as the other,—a place where each may sleep "the sleep of undisputed possession, haunted by no vision of displacement" or "nightmare of Mrs. Partington's broom."

Your suggestion of the profession of pharmacy as suited to women strikes me favorably,—more so, by far, than the reasons assigned for it, viz., that it requires "no cool head and calm nerves," "no clear judgment," "no physical powers to bear active toil and exposure," and only a fair measure of intelligence, for its successful prosecution. The "male pharmacist" will hardly cry, "Mawsh Awlaw! God be praised!" as he reads; and the implied distrust of the purity of the motives of medical women can hardly fail to suggest another view of the matter to every candid mind. The fact that women have sought the more arduous duties of the medical profession before making any attempt in the direction of one

which imposes less self-denial and hardship while offering equal pecuniary rewards, is evidence that they have been impelled by a higher motive than mere improvement of their own condition at the least possible expense of exertion and responsibility,—that the step, in fact, has been taken in response to a demand of society for their services in departments of the profession which cannot be as suitably filled by men. Your proposition, nevertheless, is a good one; and many women who do not feel like assuming the responsibilities and anxieties of the physician's life would find in the profession of pharmacy an agreeable outlet for their energies, and a means of securing comfortable fortunes. I am reminded, however, of the farmer whose judgment in a certain case depended upon the question whether it was his own or his neighbor's ox that had been gored. The pharmacists evidently take a different view of the matter from the one you advocate. Several women have applied for admission to the Philadelphia College of Pharmacy without success. One of them, compelled to look in more liberal New York for what was refused her here, expects to graduate there next spring. Another, after seeking the necessary apprenticeship of numerous druggists in this city, who were all willing, and even anxious, that some other, *other* druggist should receive her, was finally rewarded for her perseverance by finding a man with a soul large enough for the emergency, who admitted her to his laboratory. Though the most scrupulously exact and careful of druggists, he finds her work satisfactory, and exhibits her tinctures and ointments as triumphs of the art. The corporators of the "Woman's Medical College" of this city look forward to a School of Pharmacy in connection with the medical school, as part of a plan for enlarging the opportunities for women. The new college building, to be completed in February next, will have accommodations for such a school, also for a department of dentistry.

Thus, some of the obstructions to "new avenues for suitable employment for women" are gradually disappearing, and I trust that the time so long talked of as "not far distant" is really near, when women, seeking admission to the various colleges and universities, instead of being cordially invited to "apply next door," will hear the more welcome summons to "walk in" and accept the "freedom" of the institution.

In all seriousness, I believe that there can be no real conflict of interests between men and women in the medical or any other profession, or in any department of labor whatever, since there is a mutual dependence of each upon the other, bringing mutual good; nor can either be superior to the other in any true and large sense, for both are but

"Parts and proportions of a wondrous whole."

And I think that I speak for the women of the profession in saying that it is not with them a question of equality with men,—above all, not a question of rivalry with men,—but it is the *vital* question of *individual* privilege and *individual* development of such satisfying education as shall secure to themselves enlarged activities, with the emoluments naturally accruing therefrom, as well as a question of increased opportunities for serving humanity, especially among the weak and suffering of their own sex. Could those who doubt the expediency of the admission of women to the medical profession have an opportunity of seeing our students at their work; could they witness for themselves their earnest pursuit of knowledge for its own sake, their eager search for truth among conflicting testimonies upon medical questions, their brave exertions in overcoming a natural repugnance to some of the details of the study, for the sake of accuracy and in the cause of scientific investigation, I am confident that, though prejudice might not yield to a feeling of positive admiration, at least a sense of justice would impel them to the removal of every obstacle in the way of the honest endeavor of those who, in the language of one whose professional life, not long since ended, is the special heritage of every earnest medical woman, hold themselves "accountable to God for the use of the powers which He has given them;" who believe that "their work is established in the fitness of things and in the necessities of society, and that the movement belongs to the 'revolutions which never go backward.'"

FRANCES EMILY WHITE, M.D.

[The editor of the *Times* feels that an apology is required for the occupation of so much space by so long a letter upon a subject which it has already been stated is not in a stage for profitable discussion. The letter was admitted partly because it is well written, although overlengthy, but largely because, if it and the other letters of like import but less ability received upon the same topic were declined, the accusation would be made, or might be made, that the *Times* refused to let both sides of the question be heard. We do not propose to be drawn into any discussion of the merits and demerits of women-doctors, but we certainly may be allowed to remark that all our fair critics show a "confusion" of thought about our editorial which is exceeding strange. We never said or implied that women-doctors were addicted to "free love." The plan of the editorial was, in a few words, as follows:—The extreme woman's-rights

movement has vitality, although repugnant to most men and allied to vile practices, because underlying it, not forming part of it, is the right of women to better employment,—a right which all good men acknowledge. The opposition to women-doctors [in so far as it was sincere, for, of course, it was founded on mixed motives] rested on the idea that they are not fitted for the calling, about which there is room for difference of opinion; but concerning pharmacy no such room is apparent.—Probably the subject touches too closely the feelings of those immediately concerned to allow their reasoning powers a fair chance, and hence the many ghosts of inferences which rise; otherwise the logical acumen of our critics must be very trifling. In regard to the sincerity of those who opposed the "women-doctors" movement some years ago in this city, we may state that with scarcely an exception the leaders were men who, from age, position, or other circumstances, had no possible interest at stake.]

EXON.—Philadelphia is so far behind the times as not to have the employment of medical assistants, as a general thing. In regard to getting into private practice, we have only one item of advice to offer, namely, *avoid* Philadelphia. Unless you can find some established practitioner to help, we know of no other way than to select some locality not overcrowded with men of ability, open an office, and do your best. It is possible that, by advertising, a position as assistant might be obtained in some part of the country.

OBITUARY.

WARREN.—In Cairo, Egypt, on the 27th day of June last, William Christian, aged eleven months and fifteen days, the only son of Dr. Edward Warren and Mrs. Elizabeth C. Warren.

OFFICIAL LIST

OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U. S. ARMY, FROM SEPTEMBER 8 TO SEPTEMBER 14, 1874, INCLUSIVE.

ABADIE, E. H., SURGEON.—Relieved from duty in Military Division of the Atlantic, to proceed to St. Louis, Missouri, and await orders. S. O. 200, A. G. O., September 11, 1874.

SUMMERS, JOHN E., SURGEON.—To report to Commanding General, Department of the Platte, for assignment to duty as Medical Director of that Department. S. O. 200, c. s., A. G. O.

SMITH, J. R., SURGEON.—Assigned to duty as Post-Surgeon at Fort Monroe, Virginia. S. O. 200, c. s., A. G. O.

WRIGHT, J. P., SURGEON.—Assigned to duty as Chief Medical Officer, District of New Mexico. S. O. 96, District of New Mexico, September 7, 1874.

STORROW, S. A., ASSISTANT-SURGEON.—To report in person to the Commanding General, Department of California, for assignment to duty. S. O. 200, c. s., A. G. O.

NOTSON, WILLIAM H., ASSISTANT-SURGEON.—Ordered to New York City for examination for promotion before the Army Medical Board, and at its conclusion to report to the Commanding General, Department of the Platte, for assignment. S. O. 200, c. s., A. G. O.

WILLIAMS, J. W., ASSISTANT-SURGEON.—Assigned to duty as Post-Surgeon at Fort Rice, Dakota Territory. S. O. 193, Department of Dakota, September 5, 1874.

KINSMAN, J. H., ASSISTANT-SURGEON.—Granted leave of absence for one month, with permission to apply for an extension of five months. S. O. 189, Department of Dakota, August 31, 1874.

BARTHOLOMEW, JOHN H., ASSISTANT-SURGEON.—Ordered to New York City for examination for promotion before the Army Medical Board, and at its conclusion to report to the Commanding General, Department of the Columbia, for assignment. S. O. 200, c. s., A. G. O.

CARVALLO, C., ASSISTANT-SURGEON.—Ordered to New York City for examination for promotion before the Army Medical Board, and at its conclusion to report to the Commanding General, Department of the Missouri, for assignment. S. O. 200, c. s., A. G. O.

LAUDERDALE, J. V., ASSISTANT-SURGEON.—Assigned to duty at Fort Wingate, New Mexico. S. O. 143, Department of the Missouri, September 10, 1874.

LORING, L. Y., ASSISTANT-SURGEON.—To accompany Battalion of 8th Infantry to Fort Yuma, California, on steamer which leaves September 5. S. O. 100, Military Division of the Pacific, August 31, 1874.

ELBREY, F. W., ASSISTANT-SURGEON.—Ordered to New York City for examination for promotion before the Army Medical Board, and at its conclusion to report by letter to the Surgeon-General. S. O. 200, c. s., A. G. O.

HALL, J. D., ASSISTANT-SURGEON.—Assigned to duty as Post-Surgeon at Fort Benton, M. T. S. O. 193, c. s., Department of Dakota.

SATURDAY, SEPTEMBER 26, 1874.

ORIGINAL COMMUNICATIONS.

POISONING BY CARBOLIC ACID.

BY W. H. WINSLOW, M.D.,
Baltimore.

A MAN, æt. 48 years, of most hardy constitution, took before breakfast, by mistake, about five grains of crystallized carbolic acid, dissolved in f3ij of water. He immediately experienced a burning sensation in the throat and stomach, much vertigo and nausea, with retching, but could not vomit. He looked pale, had hyperæmia of the fauces, a pulse of 90 per minute, and said he felt cold and nervous. He was given a tumblerful of fresh lime-water, and an emetic of tartrate of antimony and potassium and pulv. ipecac. No result followed. The nausea and vertigo continued, but the patient, having recovered from his fright, went to his daily labor. Symptoms continued about the same till 2 P.M., eight hours after the accident, the giddiness interfering somewhat with his working, and the nausea preventing him from eating his dinner. Free emesis then took place, which ameliorated his nausea, but the burning in the gastric region and the vertiginous trouble persisted till the following day. From the smallness of the dose and the rapid action of the drug, it is evident that the symptoms were caused by peripheral irritation of the vagi and the sympathetic nerve fibres. This affected the heart by reflex action, as the pulse did not decline till perfect recovery. The acid could not have injured the mucous membrane much, if any, and though by irritation nausea was excited, yet its anæsthetic effects were clearly demonstrated in the stomach's resistance for many hours to the large emetic given, which acted freely when time had abated the anæsthesia.

Among the different qualities of carbolic acid manufactured, none is more disagreeable and acrid than Calvert's No. 4. It is a reddish, oily, pretty fluid, of most disgusting odor, put up in blue bottles and having printed directions for use, and was the preparation most commonly used for disinfecting purposes during the recent epidemic of variola. Many families in my neighborhood kept receptacles of this acid exposed about the house, and one lady had an uncorked bottle, containing about a fluidounce, suspended to a chandelier in the dining-room. During house-cleaning time this bottle was taken down and placed upon the table, where a hearty two-year-old child found it, about 10 A.M., and swallowed about f3ij of the contents. He immediately dropped the bottle, screamed, and fell upon the floor. His mother, taking in everything at a glance, picked him up and ran into an apothecary-store next door. The person in attendance forced the patient to drink about f3iv of lime-water and f3i of olive-oil, when insensibility supervened. I saw him ten minutes afterwards. He was in profound coma, with general sensibility totally abolished. The surface was pallid, and bedewed with copious perspira-

tion. The limbs were flaccid, the eyelids were closed, a bluish, pinched expression rested about the lips and nose, the alæ moved excessively, the lower jaw was dropped, and a white, frothy saliva, which filled the fauces, ran freely from the oral cavity. The pulse was soft, feeble, and irregular, at 160 a minute; the respiration was labored, irregularly jerking, stertorous, and hissing, 70 times a minute; the mucous membrane of the fauces and tongue was white, and patchy with marginal streaks of capillary injection; the pupils were widely dilated, and irresponsive to light. He was not able to swallow a few drops of milk placed upon the base of the tongue: therefore the latter was pulled well forward, and a teaspoonful of olive-oil was emptied into the pharynx. This was immediately ejected, with much frothy mucus, and an alarming suffocative attack followed. This dose was repeated several times, with like result. An emetic was rejected, and apomorphia could not be obtained. Occasional shudders ran over his body, followed by slight clonic convulsions of the muscles and most alarming and prolonged spasms of the glottis, during which cyanosis became very deep and life seemed about to terminate. Any attempt to administer anything per ore, or to clear the throat of mucus by a cloth, wet with iced port-wine, upon the finger, excited the distressing and dangerous spasm of the glottis and a general convulsion. The condition was distinctly tetanoid, and squeezing the hand firmly, fanning him violently, and applying a cold cloth to his head, each separately caused an attack of the convulsions. Upon severe irritation (the prick of a pin) the same result occurred; but no other signs of sensibility could be elicited; thus proving that the poison more profoundly affected the sensorium, or the whole cerebrum, than it did the spinal axis.

Considering all the circumstances, it was not deemed advisable to try to use the stomach-pump. Turpentine injections were administered, large mustard-plasters applied over the trunk and inferior extremities, and the throat was cleared by a cloth over the finger. So alarming and prolonged was one of the suffocative attacks, and so deeply cyanosed was the surface, that I thought laryngotomy might afford some relief; but, my friend Dr. Cleeman, who gave me the benefit of his mature judgment, not agreeing, and the spasm yielding just when it seemed life must go, the idea was abandoned.

The poor child lay in this unsatisfactory condition, with no apparent improvement, for two and a half hours. Occasionally the perspiration would increase greatly in quantity upon the face and breast, and then evaporate, to be renewed again in drops, which grew under the eye. Soon after the application of a fresh sinapism to the abdomen, he slowly returned to consciousness, pushed and pulled at the plaster, and called "mamma" faintly. During the next few hours he took considerable powdered chalk and sugar, white of egg, iced port-wine and milk, and had a most ravenous appetite.

At 6 P.M., eight hours after the accident, he ate

a large slice of bread-and-sugar, and talked intelligently to the anxious ones around. The profuse salivation had disappeared; the pulse was soft, full, but jerky, at 160 a minute; the respiration was 55, dry and whistling, and the child was restless and of fitful temper. Urine and fæces, without any mucus or blood, were voided at 7 P.M., and the only danger apprehended was that of extension of the existing laryngitis. He was kept in a steamed atmosphere, and during the evening was apparently comfortable. There was no fever, the skin was moist and cool, respiration softer, at 48 a minute, and pulse at 150, with nothing remarkable in his general appearance.

Up to 11 P.M. he had occasional naps of disturbed sleep, then would lie with eyes half open, mumbling. When his mother put him into bed, he said, distinctly, but hoarsely, "I want a drink of ice-water." From this time to 4 A.M. he had some sleep, but was restless, and moved about often in the bed. At this time the face was pale, and pupils normal; the pulse and respiration were unchanged, except that the glottis was kept closed after inspiration, until the air apparently forced it open with an audible grunt. There was no tympany or tenderness of the abdomen, and no anæsthesia or paralysis of motion. There was no attempt to vomit, from first to last. A large fecal evacuation, containing mucus and a curdy material (undigested milk) without blood, had occurred at 3.15. The urine was heavy, but normal.

After 4 o'clock in the morning, a change took place. The patient's skin became dry, and had the pungent heat so characteristic of scarlatina. He became restless, whined and moaned, and talked hoarsely and incoherently, shrank from the light, and pulled at his head with both hands, as if to remove some offending object. The pulse rose to 170, and the respiration to 50 in a minute. His movements were peculiar and remarkable. He would crawl upon his hands and knees from one side to the other of the bed, then up to the pillow, where he would lie a moment, then he would move down in the bed and pull the clothes over him, only to kick them off and to begin his journeying again; all the time moaning and muttering unintelligibly. The respiration was now altered in rhythm, becoming more irregular; a few mucous râles could be heard in the lungs, but there was no change in the rough, hissing sounds as the air passed the glottis, and only slight obstruction to the respiration. The eyes moved from side to side and upwards incessantly. No squints, twitching of the facial muscles, or grinding of the teeth occurred. Isolated muscles jerked spasmodically, and tendons sprang into prominence and then disappeared. The thumbs were flexed into the palms.

In spite of active measures adopted to combat a supposed meningitis, the symptoms grew rapidly worse. The respirations became shallow and more irregular; the pulse rose beyond counting; the eyes became quiet and glazed, the limbs motionless, and coma profound. He died quietly from failure of the respiration, the heart beating some moments longer, at 6 A.M.,—twenty hours after

the ingestion of the poison. No post-mortem was permitted.

In Dr. H. C. Wood's work on Therapeutics, *Materia Medica*, etc., carbolic acid is said "to produce muscular weakness primarily, then tremblings and restlessness, and finally convulsions; which latter are epileptiform, and originate at the base of the brain." This little patient first fell down. Was it from muscular weakness, or shock? I think from both. Dr. King's case fell down immediately, never to rise again. The shock would, of course, cause muscular weakness. Tremblings and restlessness would necessarily accompany a moderate shock, though none were noticed in this child's early condition. Convulsions followed very soon, and were prolonged and severe. I believe it is now settled that from carbolic acid poisoning the convulsions are of cerebral, not spinal, origin. The rapid pulse and respiration are accounted for by the peripheric irritation of the pneumogastric nerves, and the profuse diaphoresis by the vaso-motor paralysis.

The terrible shock of the morning evidently produced no serious lesion of the nerve-centres, or effusion within the cranium. Perforation or severe inflammation of the stomach did not take place. There was not any serious obstruction to respiration. Up to 4 A.M. there were no symptoms to indicate danger, more than when the patient first recovered consciousness,—certainly no signs of progressive effusion. If there was meningitis finally, it seemed too mild to terminate life so soon. In the first period there was shock, then a prolonged and extraordinary term of quiescence, then a second explosion, which terminated life. Some cases are said to die of "secondary shock." I believe that to have been one, at least, of the causes of death in this case. The long period of repose was due to the drug's anæsthetic properties, but as soon as that effect had passed away a "secondary shock" occurred, which produced vaso-motor paralysis, cerebral effusion, and death.

ON THE TREATMENT OF ASCARIS OXYURIS.

BY SAMUEL S. BOND, M.D.,

Washington, D.C.

ALTHOUGH no single drug, or combination of drugs, can be reckoned as a specific for all varieties of intestinal worms, yet there are remedies whose action is almost that of a specific, as, for instance, the combination recently published in the *Druggist's Circular* by Mr. Schafhirt, and since copied into most of the medical journals, for the entire destruction of the tapeworm, and the oil of male fern, turpentine, and more especially santonin, for the lumbricoides; and though each of these remedies sometimes fails of the object, nevertheless we generally succeed in expelling the tormentors by the administration of one, where another has previously proved ineffectual. I think that in the case of lumbricoides, santonin seldom fails in its action.

I use it almost exclusively, and have greater confidence in it than in any other single remedy; but, while this and the many other remedies are so generally successful in expelling the larger worms which infest the small intestines, there are no remedies laid down in our text-books that we can rely upon for permanent relief from the annoyance of those terrible tormentors, the oxyuris.

Much has been written and many investigations have been made regarding these pests, and yet, either from a mistaken theory in regard to their exact residence in the intestinal canal, or an improper mode of application of the proper remedy, or inability to select the proper remedy, real cures are less often effected and less confidently looked for in this than in any other variety of intestinal worms.

The employment of bitter injections, especially quassia and aloes, with the administration of senna and sulphate of magnesium, separately or combined, has, in most cases, afforded relief for a limited period, but has utterly failed to cure the affection permanently.

Very recent writers adhere to the long-entertained opinion that the oxyuris infests only the lower portion of the large intestine. But a single writer, so far as I have been able to ascertain (Dr. Cobbold), locates the residence, or, as he expresses it, the head-quarters, of these worms high up in the colon, even the cæcum. I am inclined to accept this theory, for, as the doctor says, "if they were confined to the rectum the injections would afford permanent relief." Such we know, however, is not the case; partial relief only is obtained for a limited period, which period I take to be merely the time required for the oxyuris from above to migrate to the lower bowel in quantities sufficient to call attention to their presence there.

While in the drug-store of Mr. Schafhirt, several months ago, he remarked to me that the compound syrup of asarum was found in a great number of my prescriptions, and inquired if I had ever noticed its effects upon the oxyuris, stating at the same time that he had accidentally discovered it to be an excellent remedy for them.

At that time I had never noticed the effect he claimed it produced, and I observed that the fact, if fact it was, was entirely novel to me.

I had been a sufferer myself from these pests for many years, but for a long time had ceased to use remedies for the purpose of trying to get rid of them, having failed to obtain permanent relief so frequently before. Bearing in mind the remarks of the druggist, I recollected that for several months past I had not been annoyed as usual by these worms, and that about the time of their disappearance I had used a considerable quantity of the compound syrup of asarum in mixtures I was then taking for a cough. This disposed me to consider the subject as worthy of future observation and investigation.

Having among my families many children and a few adults annoyed with these worms, I resolved to test the remedy and give the drug a fair and thorough trial in a number of cases. The results of my experiments have proved far more satisfactory

and gratifying than I had anticipated, and I am thoroughly convinced that it is a valuable and reliable remedy, far more so than any other drug I have ever used for the same purpose, exhibiting in its action an almost specific effect.

I have used it now for many months, and with very decided benefit in many cases, the worms so far having failed to reappear. With quite young children I usually administer it in the form of the compound syrup, as prepared from the non-official formula of Dr. C., while for older children and adults I use a strong infusion, or give it in substance, in some cases the patients chewing it as they would liquorice-root, as much as half an ounce daily.

I usually commence the treatment by evacuating the intestinal canal by means of a cathartic, and generally follow with senna, using also nightly, for two successive nights, injections of a cold infusion of quassia, after which the internal use of the asarum for a week or ten days usually effects a cure.

Should the remedy prove as successful in the hands of others, and its anthelmintic character be established, it will supply a want which has long existed, being so devoid of danger in its nature that it can be freely administered to persons of every age and condition, and its cheapness bringing it within the means of the most indigent, while its pleasant aromatic taste renders it acceptable to children, when more nauseating medicines would be with much difficulty swallowed.

This experience is given to the profession in the hope that others may be induced to test the subject and state the result through the medical press.

ON THE MODE OF APPLYING ESMARCH'S APPARATUS, AND A FURTHER MODIFICATION OF IT.

BY W. W. KEEN, M.D.

LANGENBECK* and Mears† having reported some cases of paralysis from the use of Esmarch's apparatus, I desire to call attention to the fact that the bandage, and especially the tubing, if used, is generally applied *too tightly*. This is to be attributed to the facts that we all desire to be on the safe side, and *surely* to arrest the hemorrhage, and also that errors attend the earlier use of every apparatus,—errors which time and experience correct. In this case, in the desire to arrest the bleeding we may easily go too far, and, by applying the bandage too tightly, produce paralysis. One indication will show us whether the bandage is tight enough,—viz., if the skin remains blanched. It will be seen at once that if the arteries are not compressed the apparatus will act as the fillet in the ordinary operation of bleeding,—producing a dusky skin and turgid veins. Feeling for the pulsation of the arteries is not necessary, for the condition of the skin is a better indication.

The loosest application of the bandage that will

* Amer. Jour. Med. Sci., Jan. 1874, pp. 551-3.
† Phila. Med. Times, Aug. 15, 1874.

blanch the skin and keep it so is the best; and, in fact, I have found that with almost every new case I have used it more and more loosely.

Even if the bandage has been applied properly, when we come to apply the tubing the tendency and the temptation are to too great tightness. The tubing need not and ought not to be any more tightly applied than the bandage itself. Its narrowness and greater rigidity expose the nerves to greater risk of mechanical injury; and hence the modification proposed by Langenbeck and Mears, to substitute a second bandage narrower than the first, is an excellent one. But even with this, as Dr. Mears has shown, the pressure may be too tightly applied.

The broader the band, the more diffused is the pressure and the less is the danger, even if the pressure be too great; and it occurred to me that the apparatus could be simplified still further and at the same time made safer by using *only* the first broad bandage (two and a half inches wide). Accordingly, in using the apparatus, a few days since, for the removal of a fragment of iron from the lower part of the fore-arm of a muscular man, I tried this method, as follows, and with complete satisfaction. I applied the bandage nearly up to the elbow, using but little more force than is needed in ordinary bandaging; then taking hold of the lower end of the bandage I unwound it from below, but little force being required to pull one turn from beneath the next; and when it was all unwound except the last three turns I simply tied the ends together. The skin remained blanched; the operation was absolutely bloodless till the bandage was removed, although the arteries were so deep in a muscular fore-arm and the bandage not tightly wound. No paralysis followed. In these operations for the extraction of foreign bodies, as Brandis has pointed out, the method finds one of its happiest applications.

RESECTION OF THE TIBIA AND FIBULA AT THE JUNCTION OF THE MIDDLE AND LOWER THIRDS.

BY A. TREGO SHERTZER, M.D.,

Baltimore, Md.

ON the 23d of March last, I was summoned to see Mrs. H., aged 51, who had been run over by a large, heavily-loaded lager-beer wagon, producing a compound comminuted fracture of the right leg. Before I saw her, two physicians had seen her and advised amputation, and I was sent for to perform the operation. Upon a careful examination, I decided to resect, and sent for my friends Drs. Andre-Cathell and Taylor, who kindly assisted me in the operation. After the patient was chloroformed, I made a longitudinal incision, seven inches in length, along the outer side of the anterior portion of the tibia, and removed forty-seven fragments of bone, and, with a strong pair of bone-forceps, I cut off the four ends of the broken bones, leaving a space of fully three inches in which there was not a particle of bone. After cleansing the wound, I united it with silver sutures, using no adhesive plaster whatever, and had it firmly packed in a bran-

box, which I had made for the purpose, as follows. The outer and inner sides were made of thin board, extending from the upper portion of the thigh to the foot, with a slanting foot-board, to which I secured the foot, while the bottom was firmly closed with canvas; three narrow strips screwed over the top—one at each end and one in the middle—held it firmly together. The limb being placed in the box and well packed with bran, it could not move, and the bran could easily be removed and replaced as it became soiled, while at the same time the patient could sit up in bed. After five months she was able to walk on crutches, and is now able to walk alone, the limb being nearly one inch shorter than the other one. The wound healed without difficulty, under a dressing of sweet oil, glycerin, and carbolic acid. Not a single piece of bone came away after the operation. Throughout, general tonics were exhibited.

NOTES OF HOSPITAL PRACTICE.

UNIVERSITY OF PENNSYLVANIA.

SERVICE OF DR. H. C. WOOD.

Reported by Dr. LOUIS STARR, Chief Assistant.

AMENORRHOEA—HYSTERICAL PARALYSIS AND CHOREA —CURE.

A. F., aged 15, first applied for treatment at the dispensary on June 28, 1873. There is no history of any form of nervous disorder in her family, and she enjoyed good health herself until five years ago, when she had an attack of chorea, from which, however, she recovered in four or five months. After this, although able to attend to her studies and to do light work, she was weak, and slightly hysterical.

Menstruation began early in the spring of 1872, and was performed without pain and at regular intervals until December of the same year, when it stopped entirely. The cessation of the menstrual flow was followed by great prostration and emaciation, and by partial motor paralysis of the right arm and leg. When the patient came under observation she was very anæmic, and there was considerable loss of power in both the arm and the leg. The former was most affected, and was slightly smaller than its fellow; flexion and extension of the hand and fingers were possible, but these movements were executed sluggishly, and there was no strength in the grasp of the hand; the muscles of the upper arm and of the shoulder were not involved. There was some dragging of the right foot in walking, and a sensation of weakness in the leg from the knee down. The sensibility of the affected muscles to the faradic current was not markedly different from that of the other side. Electro-contraction was also normal.

She was placed upon the following mixture:

R Tr. ferri chloridi, f3iii;
Tr. cantharidis, ℥xxxvi;
Tr. aloës, f3ii;
Tr. guaiac. ammon., f3iiss;
Syr. simp., q. s. ad f3vi.—M.

Of this she was directed to take a tablespoonful thrice daily; at the same time a moderately strong faradic current was applied to the leg, fore-arm, and hand, for ten minutes, three times a week.

Under this treatment she began to improve, and on August 30 her appetite and general strength were much

better, the menstrual flow was re-established, and the right leg had regained its power so that she was able to walk without difficulty. The arm, though better, was still quite weak, and she complained of choreic twitchings of the index and middle fingers when sewing or holding light objects; these varied in severity, and when most severe were accompanied by similar movements in the muscles of the face. Instead of the above mixture, ext. cimicifugæ fld. was prescribed, to be taken at first in doses of f3i three times daily and gradually increased to f3iss; faradization of the arm and hand being still kept up.

After two weeks the cimicifuga was suspended, on account of the severe headache and giddiness which it produced, and she was ordered gtt. v of liq. potass. arsen. with gtt. xv of tr. ferri chlor., three times a day. Soon after this combination was adopted, the choreic movements of the fingers and face, which had apparently been unaffected by the cimicifuga, began to decrease; the strength of the arm also seemed to improve more rapidly than before.

From this time (September 16, 1873) up to the date of discharge (November 1, 1873) the favorable progress of the case was uninterrupted, and no change was made in the treatment.

She returned, according to request, three weeks afterwards, and reported herself entirely well; during the interval all electrical treatment had been suspended and no medicine whatever had been taken.

TRANSLATIONS.

THE FORMATION OF VESICAL CALCULI.—Statements of Neubaur and Vogel, that the urine of carnivora presents no essential difference from that of man, and observation of a case in which a needle thrust into the bladder through the perineum became the nucleus of a calculus, induced Studenski (*Inaugural Diss.*, 1873) to undertake a series of experiments upon dogs, with the view of establishing the influence of foreign bodies in producing lithiasis. Bitches were preferred by him for his experiments, because examinations with the catheter are more easily made upon them than upon dogs, and he introduced into their bladders by the high operation for stone various objects, such as beads of glass or gutta-percha, leaden balls, needles, etc. All of these objects except the last-named had to be of a size at least as large as a hazel-nut, to prevent their entrance into the urethra, an accident which was followed by the death of the animal. After the operation, the treatment pursued was of four kinds: 1, customary food, as meat, bouillon, bread, etc.; 2, customary food with the addition of lactic acid; 3, the same sorts of food, to which oxalic acid had been added; and 4, the use of large quantities of water containing lime. The results of the experiments proved that the same principal forms of urinary sediment are met with in dogs as in men, but that a very long time is needed for their formation. In the case of a dog which was fed with the diet of the first kind, and was killed a year after the introduction of a glass ball into the bladder, this foreign body was found to be covered with two layers of the phosphate and oxalate of lime, but they had only attained the thickness of ordinary writing-paper. In the case of an animal which was fed in accordance with the second diet-list, and which was killed four months after being operated on, no deposit was found, except in the perforation of the glass ball. The deposit upon leaden balls taken from the bladders of animals of the third series was also very slight in quantity.

The results obtained in the fourth series were of a more positive character: the animals for the most part died in a comparatively short time, but examination of the foreign bodies in their bladders showed but a slight urinary deposit upon them.

Attention is directed to the fact that no oxalate of lime was found in the urine of those animals which were fed with oxalic acid in considerable quantities, but this salt was found in the deposits from the urine of one of the animals fed upon ordinary diet. In all cases in which the introduction of the foreign body was followed by catarrhal inflammation of the bladder and alkaline fermentation of the urine, sediments of the earthy phosphates were quickly formed. The addition of lime-salts to the diet seemed to exert a marked influence upon the formation of the phosphate of lime, even when the vesical mucous membrane remained sound. W. A.

PERINEPHRITIC ABSCESS.—Schwartz (*La France Médicale*, 1874, No. 49), in describing a case, calls attention to the difficulties attending the diagnosis of perinephritic abscess. These are principally due to the deep seat of the affection and to the slight local trouble which it occasions as compared with the gravity of the constitutional involvement. The development of a fluctuating tumor in the lumbar region is the most characteristic symptom, and often a long time elapses before this is met with. In the beginning of the attack, the febrile symptoms are similar to those met with in ileotyphus, while later they resemble those of remittent fever. The patients lose flesh rapidly, and their cachectic earthy complexion may lead to the diagnosis of the disease. The pus, as a rule, remains confined to the place in which it was formed, and comes to the surface in the lumbar region, but may possibly, when the opening of the abscess is too long deferred, or when the process manifests from the start a tendency to travel, first make its appearance above or below Poupart's ligament or along the great vessels of the thigh. The pus formed in a perinephritic abscess may also pass into the bladder, the vagina, or the intestine, or, still more rarely, perforate and enter the sac of the peritoneum. Evacuation through the bronchial tubes has also been observed, and the entrance of the pus into the pleural cavity has led to pleurisy or pneumonia. The prognosis in this affection varies according to the etiology of the attack in question. Perinephritis can be spontaneous or traumatic in its origin, can be due to transference of inflammatory action from neighboring organs, or finally it may arise in the course of infectious diseases of a severe type. When the abscess is promptly opened, the prognosis of the first two varieties enumerated above is good, that of the other forms is grave. The only method of opening abscesses of this character which can be recommended is that of incision, followed by drainage of the wound. W. A.

VISCERAL RHEUMATISM.—The *Gazette Hebdomadaire*, Aug. 7, contains some notes of a case of rheumatism coming under the care of Dr. Blachez, which presented a very unusual complication,—namely, peritonitis. The patient, a young and healthy woman, had been under treatment for some weeks, suffering from an attack of ordinary acute articular rheumatism. The case was complicated by endo-pericarditis and pleurisy, but the patient did well, and was apparently about to enter upon the stage of convalescence, when, almost suddenly, one night, she was attacked by vomiting and severe abdominal pain, the belly became tympanitic, the pulse rapid and small, and there was every symptom of acute peritonitis. Soon after, delirium set in, and the patient refused almost absolutely to take nourishment, having to be nourished by injection. After lingering in this condition about a week, the patient died. Unfortunately, no post-mortem examination could be obtained.

M. Blachez remarks upon the rarity of this peritoneal complication, which he has never observed in any previous case.

As regards its existence there could be no doubt. The pain, distention, and tympany of the abdomen, the stercoraceous vomiting, the alteration of expression, the pinched nose, the coldness, all constituted characteristics upon the value of which it would be useless to insist. While all the serous membranes are tributary to rheumatism, the peritoneum almost always escapes. For this reason the case under consideration is almost unique. M. Blachez concludes by some remarks on the heart- and brain-complications occurring in this case, which, however, have nothing peculiar about them.

A. V. H.

NON-INOCULABILITY OF TUBERCULOSIS.—Dr. Edward Metzger read before the Académie de Médecine at a recent sitting an account of experiments performed by himself, to the number of seventy or eighty, extending over the last five years.

These experiments, made to demonstrate the non-inoculability view held by Dr. M., prove, he thinks, that phthisis is neither inoculable, virulent, nor specific. Capillary emboli, infarctions, or alveolar pneumonias, Dr. M. believes, have been mistaken for tuberculous deposits.

Dr. Villemain, he seems to think, has made serious mistakes in his methods of practising and observing the effect of the inoculation of tuberculous matter in animals. Dr. Metzger's paper was referred to a special committee.

A. V. H.

THE OCCURRENCE OF ENLARGEMENT OF THE SPLEEN IN RECENT SYPHILIS.—Dr. A. Weil (*Centralblatt für die Med. Wissenschaften*, 1874, No. 12), while noticing the fact that enlargement of the spleen is not uncommon in the later periods of syphilis, states that he has been able in three cases to establish, by palpation and percussion, enlargement of this organ in recent syphilis; indeed, while the primary induration was still present. The extent of the dulness in the direction of a line running to the axilla was from ten to twelve centimetres. In one of the cases there was present a maculated syphilide of four weeks' duration; and in both the other cases the eruption appeared three or four weeks after admission into the hospital.

In the course of an anti-syphilitic treatment, the enlargement of the spleen disappeared; and Weil sees in this a confirmation of his view that the tumor was due to syphilis. He expresses at the same time the opinion that the enlargement of the spleen in these cases is of the same significance as in typhus, intermittent, etc., i.e., a symptom of the infection of the entire mass of the blood. More extended observation will be needed before this symptom, which must be due to hyperæmia of the spleen and increase of the cellular elements of its pulp, can be of clinical importance.

W. A.

THERAPEUTIC NOTES.

TREATMENT OF SYNOVITIS OF THE KNEE-JOINT BY HOT SAND-BAGS.—M. Bergeret employs this treatment in the following manner. The knee is enveloped in raw cotton, and over this a bag containing two or three quarts of sand.

The sand should be as hot as can be borne by the hand, the bags containing it being of a size sufficient to more than envelop the entire area of the disease. They should of course be covered with a blanket or some non-conducting material, and should remain in

position until they cool. Under the influence of this application a rapid and profuse perspiration soon takes place. The hot sand-bags may be renewed several times a day, and before many days, such is Dr. B.'s experience, the fluid entirely disappears.

It is understood that this treatment is applicable only to the chronic stage of the disease; Dr. Bergeret's aphorism is, "Humid heat in the acute, dry heat during the chronic period."—*Gabler's Jour. de Thérap.*, May 10, 1874.

TREATMENT OF VULVAR PRURITUS.—Alum-lotions may be ordered, as follows:

R Alumin., 4 grammes;

Decoct. hordei, 500 grammes.—M.

Use the lotion three or four times a day.

M. Hardy frequently uses the following:

R Hydrarg. chlor. corros., 1 gramme;

Aquæ destil., 100 grammes;

Alcohol., q. s.—M.

A spoonful in a glass of warm water. Avoid rubbing the parts during its application.

In the vulvar pruritus which so frequently accompanies pregnancy, Dagon uses the following formula:

R Zinci oxidi, 4 grammes;

Sodæ boratis, 2 grammes;

Cerat. simplicis, 15 grammes;

Ol. amygd. dulcis, q. s.;

Morphiæ muriatis, 20 centigrammes.—M.

Bazin prescribes the following liniment:

R Liquor calcis, 30 grammes;

Glycerin., 30 grammes;

Ol. amygd. dulcis, 60 grammes.—M.

The following has also been recommended:

R Glycerin., 150 grammes;

Tinct. opii, 4 "

Ol. rosæ, 5 drops.—M.

—*New York Medical Journal*, from *La France Méd.*, No. 54, 1874.

APOMORPHIN AS AN EXPECTORANT.—M. Jurasz (*Gazette Hebdomadaire*, from *Centralblatt*, No. 32, 1874) suggests the use of this emetic in bronchitis, etc., in the same manner as ipecac and other nauseating expectorants are employed. His formula is as follows:

R Apomorphiæ chlorid., gr. $\frac{1}{8}$ ad $\frac{1}{2}$;

Aq. destillat., ℥iijss;

Acid. hydrochlor., gtt. v;

Syr. simplicis, ℥iv.—M.

Sig.—Tablespoonful every two hours.

Each dose contains $\frac{1}{8}$ to $\frac{1}{4}$ of chlorohydrate of apomorphia. In general, after the first few doses some little nausea is observed, but vomiting is not produced. This preparation is useful when it is desired to produce a more free discharge of the mucous secretions, or where these, as is frequently the case in bronchitis, are tenacious and not easily separated.

COMPOUND FERRUGINOUS POWDER.—

R Ferri carb., ℥i;

Valerian. rad. pulv., ℥iiss.—M.

Div. in chart. no. xxv.

Sig.—One to five a day in chlorosis complicated by neuralgia.

PILLS IN LEUCORRHOEA.—

R Cantharidis, gr. ii;

Camphoris, gr. x;

Ext. hyoscyami, gr. v.—M.

Ft. in pil. no. l.

Sig.—One or two a day in nervous leucorrhœic cases.

PHILADELPHIA MEDICAL TIMES.

A WEEKLY JOURNAL OF

MEDICAL AND SURGICAL SCIENCE.

The Philadelphia Medical Times is an independent journal, devoted to no ends or interests whatever but those common to all who cultivate the science of medicine. Its columns are open to all those who wish to express their views on any subject coming within its legitimate sphere.

We invite contributions, reports of cases, notes and queries, medical news, and whatever may tend to increase the value of our pages.

All communications must bear the name of the sender (whether the name is to be published or not), and should be addressed to Editor Philadelphia Medical Times, care of the Publishers.

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SATURDAY, SEPTEMBER 26, 1874.

EDITORIAL.

THE AMERICAN TEA.

GROWING along the Atlantic coast of the United States, from Virginia southward, is the *Ilex cassine*, or, as it is sometimes called, the American tea,—a plant whose leaves, mixed with those of other species of the same genus, were used by the aborigines in forming the decoction known as “yaupon,” or “black drink.” The maté of Paraguay is closely allied in its botanical relations to the plant under consideration. It is well known that this Paraguay tea contains largely of theine, and the fact that the Northern Indians used our *Ilex* very much as the aborigines of Paraguay used their *Ilex*, ought, one would think, to have attracted attention long ago to the North American plant.

During the Revolution the leaves of the *Ceanothus Americanus* were used as a substitute for the Chinese herb, and, possibly owing to this fact, some few years since a company was organized for the purpose of producing, and actually did produce, a “tea” prepared from the *Ceanothus*. Analysis showed, however, that this product contained no theine; and, although the New Jersey staple was quite extensively advertised, it soon disappeared from sight. Subsequently, we were informed by a dealer that this American tea was still manufactured, but that it was used solely for the adulteration of the genuine article. Whether or not it is still produced we do not know.

A Mr. H. M. Smith has recently made an analysis

of this “yaupon” (*The Journal of Applied Science*, September 1, 1874), and found that it contains a very large percentage of theine, besides a peculiar volatile oil having a tea-like odor. The specimen analyzed was composed in a very large proportion of twigs, yet the percentage of theine present was as great as that usually found in maté. The following table expresses the proportion in one hundred parts of the substances named:

	Yaupon.	Maté, or Paraguay tea.	Black tea, average.	Green tea, average.	Green tea.	Coffee.
		Stenhouse.	Mulder.	Mulder.	Peligot.	Payen.
Volatile oil.	0.01		0.63	0.88	0.50	0.003
Caffeine.....	0.12	0.13	0.56	0.52	6.00	1.00
Tannin.....	2.41		2.04	17.68	14.00	10.00

The yaupon leaves were a regular article of commerce among the North American Indians. The “black drink” was used by the Indians especially at their councils and tribal feasts. It was taken very strong, and in large quantities, and is said to have frequently acted as an emetic. It contained, however, besides the leaves of *Ilex cassine* those of the *Ilex vomitoria* and of other species of the genus, and it is possible that it owed to them its power of causing vomiting. Evidently, if the *Ilex cassine* possesses a persistent emetic property it will never afford a cup of tea which shall be popular with the white man. A general emesis might be a bond of misery among a council of Indians, but would hardly suit the average sippers of Bohea. Mr. Smith, however, failed to detect any emetic principle in the *Ilex cassine*, and the subject seems to demand further investigation.

DRUGGISTS' COMMISSIONS TO DOCTORS.

“THE *Evening Star* says:—The retail druggists of Chicago have taken this action:

“Whereas, The practice of paying commissions to physicians in any form is in direct opposition to the principles upon which this college was established, if not a violation of the strict wording of its code of ethics; it is therefore

“Resolved, That the maintenance of just and honorable relations between physicians and druggists or pharmacists is a matter of the highest import to our college, and we do not hesitate to condemn a system that substitutes a money consideration for the just claims of merit and education.”

“[This is apropos of our editorial of a recent issue. Now let our respectable druggists of Philadelphia follow this lead. The brave words spoken by the Northern Medical Association of Philadelphia, under a similar

provocation, some seven or eight years ago, would bear repetition and imitation by the Philadelphia County Medical Society, and all the other kindred bodies of this city.]”

The above extract is from a recent number of *The Cincinnati Medical News*. In reply, we can only state that if any regular physician in this city takes a commission from druggists he is very careful to keep his doings secret. Public medical opinion in this city certainly reprobates most earnestly such practice.

A WRITER in *The Journal of Applied Science* (September 1) states that castor-oil has so little effect on Chinese intestines that the Celestials use it habitually in cookery.

CORRESPONDENCE.

THE RECENT MEETING OF THE BRITISH MEDICAL ASSOCIATION.

NORWICH, ENGLAND, September 1, 1874.

DEAR SIR,—I had the honor of attending the dinner of the British Medical Association, in St. Andrew's Hall, on the evening of the third day of the meeting, which was a most genial and festal occasion. The grand old civic hall, that had been in ancient days a cathedral, and was adorned with portraits of local celebrities of the past, was transformed into a brilliant banqueting-saloon. There were music, and flowers, and fountains, and speech-making, both eloquent and hilarious; and, as the dining ended, a large assembly of ladies arrived and graced a platform arranged for them. The dinner-ceremonies opened with a blessing by a reverend canon, which was appropriately short, and it was followed by a most effective rendering of the majestic anthem of “God Save the Queen.” A military band played at intervals, and the peals of a trumpet pre-announced every toast.

Sir James Paget responded to the toast of “Prosperity to the British Medical Association,” and said that the body was never so prosperous, influential, and numerous in membership as at this time. He alluded to the importance of what had been presented in the special sections, and predicted the continued development of the institution. I was impressed with the evidences of the great popularity of this distinguished member of the profession, and had previously seen repeated manifestations of the profound respect and affection that are universally felt for him. In proposing the health of Mr. Southam, of Manchester, the President of the Council, Sir James awarded to him the credit of much of the efficiency of the Association.

Mr. Southam arose amidst loud manifestations of favor, and spoke of the progress of the Association during the period of twenty-eight years since the annual meeting was held in this city.

Mr. Quain, on being called for, proposed the health

of the President elect, Dr. Copeman, of Norwich, and announced him as “The foremost man in the county, who took his position as a right and in deference to what he had contributed to medical science.”

Dr. Tufnel, of Dublin, President of the Royal College of Surgeons of Ireland, and formerly of the army, responded to a toast to “The Army, the Navy, and the Auxiliary Forces,” in a speech of much enthusiasm in regard to the rights of army medical officers.

In reply to the toast of “The Visitors,” Dr. Sims, of New York, gracefully expressed his thankfulness for the welcome reception of the American guests of the Association, and disclaimed being considered a foreigner, as he was honored with membership, and had at one time resided and practised the profession in England. The evidences of respect and personal good feeling for this distinguished American surgeon were, throughout both the scientific and the social portions of the meeting, most marked, and showed the appreciation of his high character and of what he has added to one important department of surgery.

Dr. Haughton, of Dublin, made a humorous and characteristic speech, and the annual dinner concluded most happily when the ancient hall resounded to a roaring toast of “The Ladies.”

My estimate of the scientific character of the meeting is very high; and to this must be added the invaluable social influences of such a gathering of so many of the distinguished members of the profession in Great Britain, and of representatives of different nationalities abroad. As an American, I speak appreciatively of the distinguished attention and courtesy with which my countrymen were honored at this meeting. Such international representation is surely calculated to unite in the strongest sympathy the medical profession of different countries.

The occasional visits to America made by distinguished British physicians and surgeons, and the journeys undertaken every year by numbers of American medical men to Great Britain, have done much to add to the good feeling that has ever existed between the medical fraternities of the two countries. The bestowal of titled honors and distinguished social attentions on Professor Gross during his late visits to Europe have been received at home as compliments, through a representative man, to the whole profession in America. I think that I have never been introduced as an American surgeon to prominent surgeons anywhere in Europe without having kind and respectful inquiries made of me concerning Professors Gross, Pancoast, Sayre, Dr. Sims, Dr. Atlee, and a few other surgeons whose reputations have extended abroad.

I can also speak from an extended intercourse, particularly with surgeons in Europe, of their warm feeling for the American people and of a general interest in the approaching Centennial Anniversary of our nationality. Sir James Paget expressed to me his especial desire to be at the celebration in Philadelphia on the Fourth of July, 1876, and said that he would take delight in the noisy enthusiasm of the day. I have received

also expressions of such friendly tone from such distinguished surgeons as Sir Henry Thompson, Erichsen, Callender, Lister, Bryant, Hancock, Southam, Gamgee, and MacDonnell.

In a note now lying open before me from Dr. Bate-man, of Norwich, a truly good and able man, whose name is most known in America by his work on Aphasia, alluding to the recent meeting of the British Medical Association, he says, "I think it is impossible to overestimate the importance of these cosmopolitan gatherings: nothing is more calculated to consolidate the peace of the world, and to show the absurdity of resorting to physical force (which, after all, proves nothing), than these congresses, where the strife is between men of science, their object being to vie with each other in devising means for the relief of human suffering."

Mr. Erichsen has by this time reached America, on a social visit of a few months. He said to me that he anticipates great pleasure in meeting some of his surgical friends in Philadelphia, and I think that we will have the honor of seeing him there early in October. The medical profession in the United States will regret the unfortunate failure of Sir Henry Thompson to continue his journey. He was obliged to return, leaving the steamship at Queenstown, on account of the illness of his daughter. We may yet expect a visit from him, but he says, with expressions of great disappointment, that it cannot be during this season.

I think that now, after much professional intercourse abroad, and when near the end of my European tour, I may deduce as a corollary that, although England and America may differ much in governmental and social characteristics, and are separated by a vast ocean, the medical profession in both countries is indissolubly united in one common bond that has for its object the blending of science with humanity.

Truly yours,

R. J. LEVIS.

VIENNA, August 14, 1874.

TO THE EDITOR OF THE PHILADELPHIA MEDICAL TIMES:

DEAR SIR,—As my first letter, I will try to give you a description of the public hospitals of this city, which I think will be of interest to your readers.

The Vienna K. K. Public Hospital was opened as such by Emperor Joseph II., on Monday, August 16, 1784, ninety years ago. It had formerly served for a poor-house, founded by Emperor Leopold I. in 1693, and finished as late as 1769. In 1832 another building was added to those finished in 1769, which was completed in 1834, under the government of Emperor Francis I.; and in May, 1862, the large and fine building for pathologico-anatomical purposes was opened.

The hospital serves for the purposes of treating the sick and for instruction in the different branches of medicine. During the summer term of 1873 there lectured here twenty professors, twenty-three privat-docenten, and sixteen assistants.

The institution has thirteen large yards, which are converted into fine gardens, planted with trees, flowers,

and bushes, and provided with fountains, and has an area of 26,718 square feet, of which the different buildings take up 6350 square feet and the yards and gardens 20,368 square feet. Since the city has been enlarged, the hospital is situated near the heart of the city, which has a population of about 800,000 inhabitants. The gardens supply the patients with plenty of pure and fresh air.

The hospital contains one hundred wards for the treatment of the sick, with two thousand beds, which are distributed as follows, viz.:

For internal (medical) cases, 407 men and 280 women	687 beds.
" external (chirurgical) cases, 314 men and 205 women	519 "
" diseases of the eyes, 85 men and 76 women	161 "
" diseases of the ears, 11 men and 8 women	19 "
" venereal diseases, 222 men and 99 women	321 "
" cutaneous diseases, 89 men and 49 women	138 "
" reserve for variolous cases, 14 men and 12 women	26 "
" reserve for cholera cases, 10 men and 8 women	18 "
" psychiatric cases, 39 men and 21 women	60 "
" paying patients, 17 men and 14 women	31 "
" students, 20 men	20 "
Total, 1228 men and 772 women	2000 "

Besides those annually treated in the different wards, medical advice is given in this institution free of charge to those who do not need to stay in a hospital. Those who are received in the different wards have to pay twenty-five guldens per month. Those who want better accommodations have to pay two guldens and upwards per day, for which purpose thirty-one beds are set aside. Persons of both sexes upwards of the age of five are taken care of here. Infants and children up to the fourth year, inclusive, are taken care of in the St. Ann Hospital for Children, under the direction of K. K. Public Hospital, which has also the direction of the two other public hospitals, the K. K. Bezirks-Krankenhaus Wieden, with six hundred beds, and the Rudolph Stiftung, with eight hundred and sixty beds.

There are two chapels connected with the institution: one is used for daily service, the other, for paying the last tribute to the deceased.

The bath-houses connected with the institution are twenty-three feet long and four feet wide. The first and largest bath-house contains, besides two bath-tubs,—each of which can be filled with fourteen buckets,—the water-bed of Prof. Hebra. This is constructed of sheet iron, lined inside with zinc, and contains nearly sixteen buckets. An iron frame, with straps spread

across, over which is laid a woollen blanket, constitutes the base of the water-bed, and can be raised or lowered by a hinge. The bed is also so arranged that the patient who occupies it can be lowered or raised with it as required. Either cold or warm water is furnished, and the temperature can be regulated at any time.

The bath-tubs are made of copper, or sheet-iron, lined inside with zinc, and painted outside with oil-colors.

The bathing institution is under the direction of a bath-inspector.

In 1871, 42,854 simple baths, 2212 steam, and 2670 douche-baths were administered, besides 20,061 buckets of warm and 22,365 buckets of cold water given to 5015 patients in the different wards, for which purpose the wards are furnished with transportable bath-tubs.

The cleaning and washing of the bed-clothes and clothes of the deceased is done outside of the hospital, by a contractor. At present the daily dirty wash consists of 7500 pieces. The contractor has to take charge of the dirty wash at the hospital, and to return the clothes in five days.

P.

(To be continued.)

PROCEEDINGS OF SOCIETIES.

BIOLOGICAL AND MICROSCOPICAL SECTION OF THE ACADEMY OF NATURAL SCIENCES.

SEPTEMBER 7, 1874.

DIRECTOR W. S. W. RUSCHENBERGER, M.D., in the chair.

DR. J. GIBBONS HUNT asked permission to read portions of a letter from Mr. Charles Stodder, a corresponding member of the Academy, in reference to blood-stains.

Mr. Stodder writes, "There have been in this State—Massachusetts—two criminal trials in which the possibility of determining microscopically between human and horse's blood was important. In both cases, 'experts' were diametrically opposed to each other as to the possibility of recognizing any difference. It seems to me that it is not creditable to the science of microscopy of the present day that there should be such a difference of opinion.

"I think Dr. Richardson is right in advocating the use of high powers in making observations in such cases. My idea of a high power now is nothing under a $\frac{1}{2}$ (1200° with low eye-piece, or 4800° with $\frac{1}{4}$ -inch eye-piece), and from that up to a $\frac{3}{8}$; and I cannot consider your objection to Dr. R.'s theory sound, viz., 'that serious loss of definition generally went hand in hand with gain in amplification.' This may be your experience, as it has been that of almost every one who has purchased a $\frac{2}{5}$ or $\frac{3}{8}$ made abroad, but the performance of Powell & Leland's $\frac{1}{8}$ and Tolles's $\frac{1}{8}$ in the hands of Dr. Woodward, and of Tolles's $\frac{3}{8}$ in the hands of Mr. Moorehouse and of G. B. Harriman, of Boston, results that have been published and are before the public, should have dissipated such belief.

"Now, it is by the use of such instruments that will give good definition with a magnification of 2000° to 20,000°, that histology has hereafter to be studied, but it will take twenty years for the doctrine to be generally accepted; and such instruments and powers must be

used for the measurement of the *differences* in size between the various blood-globules, and such I take it to be what Dr. R. means."

"Now, Mr. Director," proceeded Dr. HUNT, "I will ask permission to make some remarks in reference to this interesting letter, and also on the subject of high-power definition, from my point of view. With Dr. R. and Mr. Stodder I quite agree in a common want for high amplification, but, in connection with high amplification, I want especially sharp definition and freedom from color; and I must still be allowed to say that all my trials with such high-power lenses as a $\frac{2}{5}$ and $\frac{3}{8}$ have only confirmed my previous disappointment.

"Reference is made in the letter to the performance of high-power lenses in the hands of expert microscopists. But I will ask you to observe this fact, viz., that all such reported trials are tests by oblique illumination. Now, under such conditions, it is not possible to judge of the best corrections of a lens for either chromatic or spherical aberrations; neither do opticians *correct* their objectives by such illumination. Therefore I do not attach much importance to such published trials, as full reports of *all* the qualities of such lenses, but only of *special* points which they may possess.

"If my $\frac{3}{8}$ resolves the Amphipleura clearly into lines or dots according to the special illumination, and I simply state the fact, microscopists can judge quite correctly of its power in that direction, because on the test diatoms are structures of known size or distances apart, and marvellously alike on the average: hence from these diatoms we have derived a language understood by all, by which we can communicate the performance of lenses in such work. But turn this same $\frac{3}{8}$, which resolves the lines so readily, on a bacterium, or salivary corpuscle, or yeast-globule, or white blood-corpuscle, and adjust for central light for best definition, and we have no language as in the case of diatoms by which to express the 'unhappy luminosity' which surrounds such ordinary objects of histological observation when viewed under the $\frac{1}{2}$ or $\frac{3}{8}$ objective. In other words, these high-power lenses which resolve the diatoms by oblique light—and it may be done without difficulty by lenses of much lower power—fail to define sharply and free from color such objects as I have mentioned, by central light.

"Let me illustrate my meaning by analogy. We know that it is customary to grade applicants for admission into college classes in proportion to their proficiency in mathematics. Now, physiologists acknowledge that special brain-development endows the mathematician. A boy may have that special organization and be an accomplished mathematician, but be quite backward in all other departments, or he may not possess this special brain-development, yet be an accomplished scholar in literature and many branches of science; still, he is graded obliquely by his mathematics. Does such testing convey any just idea of the boy's intellectual acquirements? For the teacher such testing is convenient, but for the boy it is *unjust*, and gives no indication of his general mental aperture. It is just so with our judgments in reference to high-power lenses. Like acrobats, these instruments will perform some difficult feats, but when employed on objects of ordinary histological research by central light, my experience teaches me they are not yet corrected for satisfactory definition.

"The so-called podura scale would be a good test for perhaps *all* the qualities of such lenses, and, like the diatoms, is known to all microscopists; but it is impossible to obtain slides with covers thin enough to be used.

"Two things are essential in all real microscopical work, and one is as important as the other. These are a good lens at one end of the tube, and a good brain at the other; and wide differences in definition and aperture exist in both.

"After all, microscopical work is only another way of seeing. It requires natural qualification and special training, in which all are not competent. One individual may listen to the music of the sublimest orchestra and hear only the general melody and derive only a sensation of general pleasure; another will follow tenaciously each separate instrument, and yet combine the whole into one sweet harmony immeasurably beyond the conception of the other. It is so with gazers down the tubes of microscopes. Most people derive a gratifying sense of general pleasure; a few see many visible things, as definition, quality of field, character of illumination, color, etc., properties of the lens; also form, color, size, and structure, properties of the object; and all at one view. It will always be so."

Dr. J. G. RICHARDSON replied in answer to these remarks that, plausible as were the arguments and striking the analogies brought forward, he believed that the truth or falsehood of the proposition that "serious loss of definition (in the use of high powers such as the $\frac{1}{25}$ and $\frac{1}{30}$) generally went hand in hand with gain in amplification," was chiefly to be established by an unbiassed examination of the downright facts. In the case under discussion, it was admitted that, for fifty years past, blood-stains had been investigated by some of the ablest microscopists of Europe and America, for the express purpose of discriminating the kinds of blood by the appearance of the corpuscles, yet without success; and it was also admitted that he had (see *Philadelphia Medical Times*, July 18, 1874, p. 665), in six different dried stains, distinguished the kind of blood with perfect correctness, by microscopical examination. Under these circumstances it appeared as if there was no escape from the conclusion either that he (Dr. R.) was a more skilful microscopist than the great masters of the art above referred to, or that he had made the discoveries described by the aid of superior lenses—"improved tools"—over those which had previously been employed; and therefore, being persuaded that his friend Dr. Hunt was too inexorably unprejudiced in his favor to acknowledge the former preposterous alternative, that gentleman seemed to be necessarily impaled upon the other horn of the dilemma, and must, perforce, admit that, in the examination of blood-stains at least, the advantages of "gain in amplification" exceeded the disadvantages entailed by "loss of definition," in the use of high powers such as the $\frac{1}{25}$ and $\frac{1}{30}$ objectives.

As a further and even more direct evidence that superior lenses were the source of these and other discoveries, he might mention that, previous to the purchase of a $\frac{1}{25}$ from Mr. Wales, six years since, he had hundreds of times tested his $\frac{1}{4}$ -inch objective, by endeavoring to obtain with it and the A eye-piece a view of the moving molecules in the salivary corpuscles, but uniformly without success. Yet on the second trial of the $\frac{1}{25}$ lens, and on the very first in which he obtained a suitable illumination, he saw at once and with beautiful distinctness this curious movement of the granules, for which he had so many years been vainly searching with inferior tools.

Dr. RICHARDSON added that, in reference to the process of measuring the fresh or dried blood-corpuscles of different animals, there was one important but purely mechanical advantage attending the employment of high powers, to which he wished to call the attention of members. When measuring the diameter of the various disks by means of the cobweb micrometer, the operation, as is well known, is analogous to that of finding the size of a number of small circles upon paper with a pair of blunt-pointed dividers; and since the micrometer-threads in the one case and the compass-points in the other remain always the same size, it is easy to see that errors in manipulation, arising from the difficulty of deciding when the threads or points *exactly*

coincide with the margins of the objects to be measured, will be much less important if those objects vary from $\frac{1}{8}$ to $\frac{1}{16}$ of an inch (as the blood-corpuscles spoken of appear to do under a $\frac{1}{30}$ lens), than if their diameters only range from $\frac{1}{25}$ to $\frac{1}{16}$ of an inch, which are about the limits of their apparent magnitudes as seen beneath a $\frac{1}{4}$ -inch objective.

REVIEWS AND BOOK NOTICES.

COCAIN, VERATRIA, AND GELSEMIUM: TOXICOLOGICAL STUDIES. By I. OTT. Philadelphia, Lindsay & Blakiston, 1874.

The United States has produced, thus far, so little good, original work in physiology, that every new production of the sort is doubly welcome: welcome as new scientific truths always are, and welcome also as the offspring of the new and higher ambition which is permeating the profession in this country. The little brochure before us contains much thoughtful, careful, good work, and certainly demonstrates not merely the close acquaintance of the author with the ways and instruments of modern physiology, but shows that he possesses the ability to use this knowledge in the acquisition of new truths. Surely the harvest is ready, but the reapers are few. Let us hope that this new worker shall have the continuous activity, as he has the ability, to win a recognized place among the world's physiologists.

THE MEDICAL REGISTER AND DIRECTORY OF THE UNITED STATES. By SAMUEL W. BUTLER. Philadelphia, 1874.

This volume, of about eight hundred and fifty pages, is the crowning work of a very busy and useful life, and is a legacy of no mean value to the profession. The immense labor necessitated in its compilation may be known by the fact that within its pages are embraced the names, addresses, and educational and professional status of over fifty thousand physicians, with lists of medical societies, abstracts of laws affecting the profession, and a great amount of other miscellaneous matter. The editor, some fifteen years ago, commenced collecting the names of physicians, and in course of time obtained some twenty thousand; but in 1871 he purchased from Dr. Toner, of Washington, D.C., a list of about forty-eight thousand physicians, of all schools and classes, obtained from the internal revenue department. To each of the addresses in this list a circular, asking for information, has been sent by Dr. Butler, and upon the replies to these, and the information derived from alumni lists, transactions of medical societies, and other allied sources, the present volume rests. No doubt there are some mistakes and numerous omissions in it, but, in the language of the preface, "those only who have neglected to reply to the circulars are responsible for them." To publishers, druggists, and those members of the profession whose sympathies and needs are wide enough to reach beyond their own immediate neighborhood, this book must be invaluable. We trust that the pecuniary result will be such that the family of the editor will reap a rich harvest of substantial reward: certainly the reputation of Dr. Butler will for many years be kept alive as that of the man who dared and successfully achieved the herculean task of cataloguing the American profession.

A PRACTICAL TREATISE ON THE DISEASES OF WOMEN. By J. GAILLARD THOMAS, M.D. Fourth Edition, revised. Henry C. Lea, Philadelphia, 1874.

As a new edition of this book appears about once a year, we do not feel called upon to do more than chronicle the successful termination of the fourth labor of its author.

SELECTIONS.

REUMONT ON METALLIC POISONING AND ITS TREATMENT BY MINERAL WATERS.

THERE are two kinds of quicksilver-disease; that of artisans, which is produced in the practice of various arts in which mercury is employed; and medicinal mercurialism, which is produced by mercury introduced into the system for medicinal ends. Both sorts are in their nature very similar, and differ chiefly in the degree of acuteness of their symptoms, and according to the presence or absence of combinations with affections of the system previously existing,—especially syphilis.

Of the alteration produced in the blood by mercury we know little, and that little is contradictory. Overbeck's careful researches lead him to believe that mercurialism produces a sort of anæmia, that in mercurial blood the quantity of blood-corpuscles and of albumen is diminished, while its coagulability is increased, and its amount of water is fluctuating. It seems to be established that all preparations of mercury, if introduced into the system in sufficient quantity, induce an increased excretion of bile, and sometimes a passage of albumen through the urine.

As to the form in which mercury quits the system, little is known with accuracy. In the alimentary canal it is found as sulphuret of mercury. It is not determined in what shape it appears in the perspiration. As to the stories of metallic mercury being given out in baths, they require no serious consideration; although it is certain that gold and silver articles worn by those who are taking mercury occasionally become stained by an amalgam. It has been concluded that mercury in the urine is in the shape of an albuminate, chiefly because the urine of patients under mercury often contains albumen. On the whole, the view of Overbeck is probable, that mercury is not eliminated from the system until it has been separated from its albumen.

The question how long mercury remains in the system is one of practical importance. The anti-mercurialists speak, in support of their favorite views, of its remaining many years in it; but there is no proof of this. According to Overbeck and Waller, the spontaneous elimination of mercury proceeds slowly, and may occupy seven months, or even longer. Kussmaul speaks of many months, up to twelve, and even more. The organs which appear to retain the mercury the longest are the liver and the kidneys, and the liver contains most.

Kussmaul and Overbeck have done the great service, by their researches, of dispelling in a great measure the mistaken views which have prevailed among physicians respecting the relation of syphilis to mercury. "A twofold picture of mercurialism," says Kussmaul, "runs through our literature; one painted by those who have studied it as it occurs among quicksilver-workmen, the other by those who study syphilis. The first picture has altered little in the course of time; the second has always varied according to the course of opinions on syphilis. A set of fanatical anti-mercurialists put down every ailment in the whole course of the life of a man, who may have once taken a few grains of mercury for syphilis, to the account of the metal; and looked on syphilis as a very mild disease, unless aggravated by the use of mercury. The most violent even denied that there was such a thing as syphilis, regarding it only as mercurialism."

In its best-marked and really frightful form, true mercurial disease is rarely witnessed except in quicksilver-workmen; it shows itself in a much milder form in those who have used mercury only for medicinal

purposes. In the mercurialism of artisans there are three stages of development,—the stage of erethism, that of tremor, and the final stage,—although there is no marked line of distinction between them. In all stages, the nervous system is affected in a marked degree. Such marked stages are seldom or never to be seen in mercurialism from the administration of the metal, and the symptoms are seldom simple; they are almost always combined with those of syphilis or of some other disease.

The pure symptoms of mercurialism occurring after the medicinal use of the metal that occur most frequently are either general or local: anæmic and chlorotic conditions; disturbance of nutrition, showing itself chiefly in emaciation and in muscular weakness; gastric and febrile conditions; affections of the nervous system, such as painful sensations, gnawing rheumatic pains, tremors, and paralysis; and, consequent on these, swimming in the head, loss of memory, etc. But these last symptoms undoubtedly belong more or less to syphilis also. The commonest local symptoms are shown in the mucous membrane of the mouth, the tonsils, the salivary glands, and, in fresher cases, in the mercurial rashes.

In both mercurial and syphilitic affections there is a certain alteration in the blood; but it must vary in the two, as the symptoms to which it gives rise are very different. In syphilis, one of the first symptoms is the swelling of many of the lymphatic glands, whereas we have only rarely in mercurialism some swelling of the cervical glands, as a consequence of stomatitis. The pathological productions of the two diseases are very different. The mercurial dyscrasy must be viewed, on the whole, as a catalytic process, which has little to do with new or plastic formations, and which, at most, causes some thickening of the mucous membranes and the enlargement of a few glands; while syphilis shows the greatest tendency to hyperplastic and new formations. Soft nodes (gummy exudations) occur in syphilis only.

As regards the further question whether mercurialism does not impart a malignant character to syphilis, we may reply that the worst forms of syphilis occur in those who are not treated at all, or certainly not with mercurials; while we grant that the solvent action of mercury may be prejudicial in phagedænic and sloughing ulcerations. As to the affections of the bones ascribed to mercurialism, we have already said that only local ones of the jaws, connected with profuse salivation, are ever produced.

If lead be introduced into the system for any length of time, in small quantities, the characteristic symptoms of lead-poisoning are produced. Lead is partly inhaled in extremely minute particles, partly taken up in the intestinal canal, partly introduced through the skin, or through the nasal passages in snuffing into the circulation. It is probable that all preparations of lead become converted in the intestinal canal into albuminates, which, being dissolved in the stomach, are partly introduced into the system. It is not known in what form it exists in the blood, but it occurs in it in smaller quantities than in other parts of the system. From the blood, the lead passes into the parenchyma of various organs.

Little is known of the mode of operation of lead in the system, though it has been generally believed that it has a special affinity for the voluntary muscles, and occasions paralysis of them and loss of their electro-muscular contractility. But Heubel has recently arrived at some important conclusions. He finds that the relatively greater quantity of lead accumulates first in the osseous substance, and next in the kidneys. After this come the liver, the central portion of the nervous system, and only after these the muscular and

intestinal fibres. Heubel, therefore, rejects the theory that blood impregnated with lead has a power of contracting the muscular coats of arteries and of veins. Heubel, regarding the liver and kidneys as being merely the organs that eliminate lead, and on that account contain a large portion of it, thinks that lead has, on the whole, the greatest affinity to the nerve-substance.

The elimination of lead from the system, apart from what passes through the intestinal canal as sulphuret, takes place most frequently through the biliary secretion. It has been assumed that lead is eliminated through the skin, owing to the dark color of the skin after sulphur-baths which has occasionally been observed. The occurrence is undoubtedly very rare, and is explained by the action of the sulphur of the water on particles of lead lying in the folds of the skin.

Lead-poisoning has of late years become more frequent, owing to the use of cosmetics and of snuff containing the metal. It sometimes requires much discrimination on the part of the physician to discover it. The blue line on the gums is often a most valuable sign. The peculiar symptoms of saturnism are, according to their frequency, lead-colic, pains of the joints, paralysis, affections of the brain, anæsthesia. The characteristic paralysis attacks most frequently the fingers, the hands, and the fore-arms; less often, the lower extremities. The great characteristic is the loss of extensor, not of flexor, power.

As to other metallic poisonings, chronic arsenical poisoning is rare. Some doubt whether there is such a thing as chronic copper-poisoning, but paralysis of the extremities is said to characterize it.

It would be very desirable to explain how sulphur-waters are able to fulfil the indication of disengaging the metal stagnating in the system, and of causing its quicker elimination through the skin, liver, and kidneys. To account for it, Astrie has propounded the theory with reference to mercury and to lead, that the sulphurets of the alkalies and the sulphate salts render the metallic albuminates soluble, and that the albuminates, having been made soluble, are conveyed out by means of the secreting organs, whose functions have been heightened by the whole process of a water-cure. Probably the sulphur-waters act in this case by dissolving the protein compounds. For the present we must be satisfied to use such chemical views as working hypotheses, and indeed they are supported to a considerable extent by clinical observation, although there is no doubt that there are other factors concerned in the elimination of metals.

We know as yet few facts which prove direct elimination of metals by the use of sulphur-waters. The occasional occurrence of mercurial stomatitis and salivation during a sulphur-water cure in patients who have used mercury even at a considerable distance of time, can only be explained by the blood's taking up metal which had been combined with the tissue of organs. There are analogous cases of the reappearance of symptoms of lead-poisoning in patients who had been apparently cured of it. Although we can receive only with the greatest reserve old and new stories of metallic quicksilver being found in the baths used by mercurialized patients, or in their cutaneous eruptions during a bath-cure, yet it would seem that the metal is sometimes eliminated through the skin. Besides the case quoted by Overbeck, two cases have occurred to me (Reumont) and to my colleague Diemer, which can scarcely be interpreted in any other way than as instances of elimination of mercury in the form of sulphuret in the perspiration. I have in strongly mercurialized patients observed, by the electrolytic process during the cure at Aix, mercury in very minute quantities in the urine. Hemmann, of Schinznach, has made the

statement that he has washed metallic mercury from the fæces.

Like mercury, all other metals must, under treatment which relieves the symptoms, be extracted from the tissues. And when Tanquerel speaks of a black appearance of the skin in cases of lead-poisoning treated with sulphur-baths, he attributes this, as has been already remarked, to the union of sulphur with minute portions of mercury in the folds of the skin. I have (says Reumont) several times observed somewhat similar effects in those treated with mercurial inunction and sulphur-baths.

But much more important for the physician than the theory of their operation is the clinical observation of the value of sulphur-waters in metallic poisonings. The mercurialism of artisans naturally is seldom sent for treatment to baths, whereas medicinal mercurialism is very common, and very frequently complicated with syphilis. Some of the most renowned practitioners bear testimony to the value of sulphur-waters in such cases. Robbi commences his cure with sulphur-baths, Himby recommends them in mercurial amaurosis, Horn and Romberg in tremor, Roth in mercurial hoarseness. Many French, Swiss, and German physicians, besides those of Aix-la-Chapelle, are equally loud in their praise.

As to the method of using sulphur-waters in such cases, it is necessary to introduce the sulphur into the blood in every variety of way. Baths, drinking, and inhalations all come into play, and douches or vapor-baths are of special use in helping the elimination of the metallic molecules.

Chronic lead-poisoning has of late years been pretty frequently treated at sulphur-baths; it has generally been caused by food or drink containing lead, by cosmetics, or by snuff. Men of great clinical repute, as Schönlein, Romberg, Autenrieth, and many others, have had the greatest faith in its treatment by sulphur-waters. I myself have cured by them various cases of paralysis and colic induced by snuff.

There are very few notices of the treatment of arsenical or copper-poisoning by sulphur-waters. But there are a few successful cases on record. I myself treated with success a case of arsenical poisoning brought on by stuffing animals with arsenical paste.—*London Medical Record*.

THE WHARTON CASE.

DR. EDWARD WARREN writes to the *Baltimore Bulletin* of Saturday, August 29, enclosing two letters, which we give in full below. The cause of the correspondence was the passage, by one of the Baltimore medical societies, of a resolution which said in substance that the decision given by Prof. Taylor in his work on medical jurisprudence was of no import, because it was formed on biased and incorrect evidence as to the facts sent him by an "expert for the defence." Dr. Warren is the expert for the defence alluded to:

"15 ST. JAMES'S TERRACE, REGENT PARK, }
"June 27, 1874. }

"Dr. Warren Bey, Cairo :

"Dear Sir,—Your letter dated Cairo, June 13, has been forwarded to me by Dr. Stevenson. In answer to your interrogatories, I beg leave to say,—

"1. That I received a copy of the *Baltimore Gazette's* report of the Wharton-Ketchum trial. It was addressed, not to me personally, but to the Professor of Chemistry, Guy's Hospital. As I had resigned the office, the report fell into the hands of my successor, Dr. Stevenson, and he had it in his possession for some weeks, when he handed it to me, as being originally intended for me.

"2. You did *not* furnish me with any other statement, report, or documents relating to that trial or any other subject.

"3. You did *not*, by any word, hint, or act, comment on the evidence given at that trial, or in any way attempt to influence or bias my judgment in regard to it.

"4. The premises for my decision regarding the case of General Ketchum were derived chiefly from the report of the *Baltimore Gazette* (sent by you, as I now find).

"Taken as a whole, *I do not consider that the symptoms have any resemblance to those which are observed in poisoning with antimony*, and a further examination of the case has satisfied me that this is the only conclusion to which the *medical* facts lead. In the Guy's Hospital report for 1857, I collected and reported thirty-seven cases of poisoning with antimony. Upon the facts here collected, and others which have come to my knowledge since, I believe that the death of Gen. Ketchum was *not caused by antimonial poisoning*.

"The chemical evidence did not conclusively show the presence of antimony in the articles submitted to analysis for evidence at the trial. There was a fatal omission in those who attended on the deceased in his last illness. The *urine* was not examined for antimony while the patient was living. The only conclusion to be drawn from this omission is that those who were in attendance on the general did not suspect that his was a case of antimonial poisoning while he was living and undergoing medical treatment, or they wilfully neglected to adopt the best mode of verifying their suspicions and counteracting the effects of poison.

"As, before this occasion, I have never received any letter from you or corresponded with you in any way, I must express my surprise that it should have been imputed to you that you have in any way attempted to influence my judgment. I did not even know that you had sent me the report of the *Baltimore Gazette* until Dr. Stevenson informed me, long after its arrival in England. You have my authority for stating as publicly as you please that such an imputation is utterly untrue, and, if made by a professional man, most unjustifiable. My opinion of the Ketchum case was formed apart from all local influences and prejudices. Having now had an experience of *forty-three years* in the subjects of poisoning, and an opportunity of examining, during that period, some hundreds of cases, I feel myself in a position to act independently of all hints or suggestions. To extra-forensic statements in a case like this I give no attention.

"I presume the telegram which you quote in your letter refers to me. You are at liberty to state in reply that no experts for prosecution or defence made any application to me in reference to this trial, or furnished me with any premises or information respecting it. The whole story is a falsehood from beginning to end. I see that Dr. Reese has been implicated in the matter. I do not know him, except by name. I never wrote to him or received any letter from him respecting this trial. I am,

"Yours, very truly,
"ALFRED S. TAYLOR."

"21 CAVERSHAM ROAD, }
"LONDON, N. W., July 3, 1874. }

"To His Excellency Warren Bey, Cairo, Egypt:

"My Dear Sir,—I forwarded your letter to my colleague, Dr. Alfred Swaine Taylor, F.R.S., and he has handed me the letter which I now forward to you. I have read it at his request, and I can speak with *knowledge* as to the circumstances under which he became acquainted with the Wharton-Ketchum case. In May, 1872, I received by post, at Guy's Hospital, a pamphlet,

being a reprint from the *Baltimore Gazette*, of the report of the trial. I had no knowledge of the case before, and was ignorant in regard to the sending of the report until I came to your evidence, when I found your name interlined, and *with the simple word 'Compliments,' added in pencil*. When I had read the report I handed it to my predecessor in the chemical chair, Dr. Taylor.

"My own opinion of the case, from reading the report, was this: that *the chemical evidence broke down and did not prove that 'twenty grains of tart. emetic were administered to Gen. Ketchum,' and that the symptoms were not characteristic of antimonial poisoning and might have been produced by natural causes*, etc., etc. Both Dr. Taylor and I think that you may fairly disregard all attacks on your character, as every one is liable to them. As for furnishing 'false data,' I know that all you furnished was *The Gazette's* report.

"Very truly yours, etc.,

"THOS. STEVENSON,

"Professor of Chemistry, Guy's Hospital, London."

GLEANINGS FROM OUR EXCHANGES.

TOMMASI ON THE USE OF CARBOLIC ACID IN CHEESY PNEUMONIA.—Professor Tommasi states (*Il Morgagni*, January, 1874, quoted in *Gazzetta della Clinica*, May 19) that he has found carbolie acid very useful in cases of cheesy pneumonia which have gone on to the formation of pulmonary abscess. The medicine is administered in the form of solution (one part in forty of water, sweetened). In two years he has met with six cases, of which he relates two.

The first case was that of a boy, aged six, who had hectic, sweats, extreme emaciation, and moderate expectoration of sanguineous fetid pus. Cinchona, lactate of iron, cod-liver oil, and raw meat produced but little improvement. He now had half a gramme of the carbolie acid solution daily, the dose being increased to a gramme. At the end of a fortnight the fever ceased, the expectoration diminished and became inodorous, and in four months he was quite restored to health.

In the second case, there was abundant expectoration of inodorous pus. The usual restorative means failed; but, after the solution of carbolie acid had been given in daily doses of a gramme to a gramme and a half, the expectoration diminished, and the patient became free from hectic and regained his appetite, and his nutrition was improved. In two months the expectoration had ceased, and a respiratory murmur, though weak, could be heard in the portion of lung which had been hepatized.—*A. Henry, M.D.*, in *London Med. Record*.

APPLICATION OF AUTOPLASTY BY THE FLAP METHOD FOR THE CURE OF SALIVARY FISTULA (*The Medical Press and Circular*, August 26, 1874).—Mr. J. Morgan has found the flap autoplasic method the most successful in the treatment of salivary fistula. He illustrates his plan of procedure by the following case:

A child three years of age had suffered from abscess of cheek, followed by fistula of the parotid, just as the duct emerges from it. The opening was about the size of a very large pin-hole, with puckered edges; the quantity of secretion poured out at times was incredible, and saturated the child's clothes, giving constant annoyance. The patient had become irritable and pallid, and suffering evidently from imperfect nutrition.

For some time he tried with perseverance the application of collodion, pressure, caustics, paring the edges

and coapting them, but with imperfect results. He finally adopted the treatment by flap. A flap of skin was raised up from immediately above the fistula, the parts below and in its vicinity being also denuded. He then drew down the flap over the fistula, and attached it by points of fine suture, and coated the whole over with flexible collodion, which was renewed from day to day when required. The result was most satisfactory. After eight days the collodion was discontinued, and a perfect cure was effected. The child's condition improved incredibly in a very few weeks.

HYPODERMIC INJECTIONS OF BLOOD (*Medical Record*, September 1, 1874).—Considering the difficulties and dangers which are the obvious objections to the operation of transfusion of blood as ordinarily practised, it has occurred to Dr. Landenberger, of Stuttgart, that in many cases a fair substitute for it may be found in hypodermic injection. In one case where he has tried it the result was favorable. It was the case of a patient who was in a condition of collapse following long-continued vomiting, due to some form of obstruction of the bowels. Defibrinated calves' blood was used, and, although only eight grammes were injected, the effect was an almost immediate improvement. The patient revived, the temperature rose one degree, the pulse became again perceptible, vomiting ceased, and a certain amount of nutriment could be again retained in the stomach. This improvement lasted forty-eight hours, but was afterwards followed by collapse again. The only cases in which absorption of the injected blood will not take place are those in which the circulation is utterly depressed, as in the asphyxia of cholera, or the very last stages of phthisis, when the injection causes simply a suggillation.—*Med. Corr.-Blatt*, 20, 1874.

A SMALL ANEURISM ON THE DORSUM OF THE TONGUE (*The Lancet*, August 22, 1874).—Mr. John Gay reports the case of a lady, æt. 45, who had a pulsating tumor about a third of an inch from the tip of the tongue, and slightly to the side of the mesial line, about the size of an ordinary pea. The surface of the tongue was desquamated for some little distance around it, and the free wall of the tumor (which rose slightly above the general level) was obviously very thin. No doubt could be entertained of its being an aneurism, fed by a small artery, which could be very distinctly felt below the surface of the tongue for the space of half an inch approaching it from behind. Pressure on the artery arrested the pulsation in the tumor and emptied it. It had existed or been noticed for a period of six months. It was clearly an aneurism on an abnormally developed branch of the ranine artery. It was readily extirpated by a few strokes of the knife, and the resulting hemorrhage was easily controlled by passing one of the sutures through the supplying artery.

MISCELLANY.

PRACTICAL CREMATION.—Madame Fortmeyer, a midwife, was recently arrested in St. Louis for committing an abortion. At the investigation it was proved that Madame Fortmeyer had a unique and original method of ridding herself of all tell-tale evidence. A favorite aphorism with her was, "*Ashes tell no tales.*"

This very pleasant and amiable person indulged in the pastime of *burning* the results of conception; and it was shown at the inquest that she had *roasted* in her stove the bodies of living, breathing infants.

"Surely," says the *Missouri Clinical Record*, "this intelligent lady should be rewarded for inaugurating in this country a practical demonstration of incrimination; but we are afraid—notwithstanding the efforts of humane lawyers in her behalf—that she will be rewarded quite otherwise."

MEDICAL CHARITIES IN ST. LOUIS.—There are thousands and tens of thousands of people in our large cities who, if they can get medical attendance and medicines gratuitously when sick, and quarters in hospital if disabled by accident or disease, will never provide for a day ahead, but spend half their earnings at dram-shops (for the number of which St. Louis has an unenviable reputation). The more charity, the more left for whisky; and the more whisky, the more charity needed; until the city is given over to saloons and charity-institutions: one-half of the population engaged in making drunkards, and the other half working hard to take care of them.—*St. Louis Medical Journal*.

UNIVERSITY OF VIENNA.—The total number of matriculated students in the University of Vienna during the year 1873-4 was 7526; of whom 1109 were medical students in the winter session, and 1036 in the summer session. The number of new entries in the medical department was 194. Among the largest medical classes were those of Professors Brücke (885); Hyrtl (680); Bamberger (540); Billroth (509); Dumreicher (495); Rokitsansky (354).

DR. EDWARD WARREN, whose rapid advancement in Egypt we have already chronicled, has very recently been promoted to the position of Surgeon-General of the Egyptian Army,—the highest medical office in the gift of the government.

DR. BUCHANAN, of bogus-diploma notoriety, was arrested, Wednesday, September 16, whilst on his way to the Eclectic College, on the charge of having caused the death of a Mrs. Isaac W. Vandegrift by an improper surgical operation.

NOTES AND QUERIES.

THE MILITARY EXPRESSION OF MEDICAL RANK.

TO THE EDITOR OF THE PHILADELPHIA MEDICAL TIMES:

SIR,—I, for one, entirely concur in the views of "Rank," expressed in your issue of August 29, as to the military position of army medical officers. There is no logical reason why, at least in military circles, we should not be addressed by military titles; and frequently positive advantage would accrue. It's all very well to say,

"Rank is but the guinea's stamp,
A man's a man for a' that,"

but the fact that the guinea is stamped is what gives it currency and practical if not intrinsic value, and this is particularly true in the army at large.

It makes one a no better physician to be addressed as captain or colonel, but it tends, insensibly perhaps, to increase the respect of those officers and men who are taught to measure authority by position. It assists, in other words, in the assimilation into the military body; and a man who does not have the military spirit should not be in the service. Any one who feels himself an "outsider" should make an appreciable vacancy, and not remain as a round peg trying to fill a square hole. A medical officer is more than a mere doler-out of pills and powders. His highest functions are in the preventive, not curative, care of men, and he cannot exercise them without he has a lively interest in the service as such.

I think that it will be recognized by those familiar with the *personnel* of the corps, that, as a rule, the more military a medical officer is the more efficient he is. Martial tastes do not supply professional knowledge, but they develop those particular features of it that enable one to discharge well his commission. The man who shelters himself behind the petticoats of non-combatism, and who shirks his share of the general (not special) duties of garrison, is apt to be the one who, however wisely he may prescribe for the bedridden, is most frequently imposed upon by malingerers and is unfortunate in the management of his department.

Surgeon and assistant-surgeon are admitted misnomers as they are applied. If the committee that is to represent the interests of the corps before Congress this winter can get the organic law so changed that our commissions will be those of first-lieutenant, captain, and major in the medical department, a positive and practical advance will be made. For even if they fail to get the colonelcies sought, those grades will necessarily follow. There will be no reason for stopping promotion in the medical department with the majors, when the quartermasters and engineers (begging pardon of the latter for thus coupling them) are colonels. And by parity of reasoning hospital-stewards should be sergeants.

How medical directors can make assignments otherwise than at present I cannot see. If an officer's rank is to *entitle* him to a choice of posts, it will make endless confusion. My experience is that, as a rule, the directors do what is best for the good of the service with both fairness and consideration. (But then it may be that I am lucky as well as contented.)

CAPTAIN Z.

CORONERS' INQUESTS.

TO THE EDITOR OF THE PHILADELPHIA MEDICAL TIMES:

IN the number of the *Medical Times* for September 5, you declare it to be your "duty to hold up to deserved reprobation the system of loose and careless medico-legal examinations" now so prevalent in inquests by the coroner and his aids. That some one has at length had the courage or independence to call attention to the flagrant abuses of power and omissions of duty at times manifest in cases of this nature, may justly be regarded as cause of gratulation by all who desire to see an intelligent and faithful performance of what the law demands in a matter where life and property may be involved. The apathy in regard to this important subject is doubtless the result of the silence of the medical journals and the reluctance of physicians to assume, individually, a hostile attitude to an existing evil.

The remarks of the *Times* in reference to the imperfect, and, as a sequence, nearly useless examinations of the cadaver are well founded and to the point, but the subject may be presented in a somewhat different aspect. It cannot have escaped notice, at least of medical and legal gentlemen, how often the direct object in view seems to have been to force the case, either in respect to the post-mortem or the evidence taken at the moment, to assume such features as would render unnecessary any subsequent process at law. In explanation of this we do not see any other probable motive than is found in view of the loss of time, the trouble, and, perhaps, the too searching examination that might ensue, and prove anything but agreeable to those whose duty it is to discharge conscientiously an incumbent duty. Many years ago the writer was given to understand by a coroner—himself a physician—that where a case of suspicious, embarrassing character was in hand, the easiest was the best mode—that is to say, dispense, if possible, with the post-mortem. It is to be feared that the desire to receive the emoluments of office with as small an expenditure of time and labor as possible, and without incurring risk of subsequent legal process, has rather increased than diminished.

G. H.

Sept. 10, 1874.

NEWARK, N. J., Sept. 4, 1874.

A L'ÉDITEUR DU "MEDICAL TIMES":

MONSIEUR,—Dans le dernier numéro de votre excellent journal j'ai lu une discussion, extraite du *New York Medical Journal*, sur les appareils inamovibles et le plâtre de Paris, dans le traitement des fractures.

Les critiques qui y sont portées contre le plâtre de Paris ne me paraissent justifiables que par une mauvaise application, ou un mauvais procédé d'application, de cette substance. Voici comment on l'applique à l'Hôtel-Dieu de Paris.

On commence par faire la réduction, puis on recouvre le membre brisé avec une fine compresse bien huilée et faisant le moins de plis possible. On trempe dans le plâtre délayé des compresses que l'on replie ensuite de manière à en faire de véritables attelles (splints) au nombre de deux, ou trois, ou quatre, suivant le membre à entourer. Ces attelles ont toute la longueur du membre à maintenir, ou bien l'une d'elle est plus courte. On applique ces compresses quand elles sont molles et on les maintient par une bande plâtrée roulée assez serrée dans toute leur étendue. L'appareil

est sec et dur dans un temps qui varie de dix minutes à demie-heure, mais on le laisse sans y toucher jusqu'au lendemain.

Le lendemain, s'il y a à craindre la gangrène, s'il y a la plaie, s'il y a la moindre faison pour que l'on veuille surveiller le membre, le chirurgien coupe la bande plâtrée du haut jusqu'en bas et l'enlève.

Le membre reste alors soutenu par les attelles de plâtres, et on les fixe avec une bande ordinaire ou des bandelettes d'emplâtre adhésif.

L'appareil permet alors en enlevant une des attelles d'inspecter le membre sans le mouvoir, car il est fermement maintenu par les autres qui s'y adaptent dans toutes ses formes.

Ainsi utilisé, le plâtre de Paris conserve toutes ses qualités et y ajoute les avantages des appareils à gouttière ou des attelles en bois.

Voilà, M. l'Éditeur, les observations que m'a suggérée l'article indiqué. Je voulais vous les écrire en Anglais, mais vous avez des capables traducteurs que je m'évite cette peine.

Votre tout dévoué et assidu lecteur,
FRENCH PHYSICIAN.

TO THE EDITOR OF THE PHILADELPHIA MEDICAL TIMES:

DEAR DOCTOR,—Your effort in to-day's issue of the *Times* in behalf of the Homœopathic Hospital reminds me of a case which came under my charge recently, and which evidences the value of homœopaths as diagnosticians. A lady of refinement whom I was attending during confinement called my attention to her daughter, a bright child six years of age. The homœopathist (a prominent Arch-Street practitioner) who had formerly attended the family, upon being consulted as to the cause of the child's lameness, stated that "she had broken the bone of her foot, but that it would come right again." Not valuing his advice, she was referred to another practitioner on Chestnut Street, who confirmed the diagnosis, but stated that "the bone would have to be broken again, and set straight." Declining to receive the "surgeon's" advice as any more reliable than the "physician's," she told him so, and said that as the deformity arose gradually, she did not believe that any bone was broken, or that the child could receive a fracture without suffering from it at the time of its occurrence. She was informed that "they knew their business,"—which is doubtless true enough; but she put the case in my hands, and as the child was suffering from a well-marked case of talipes varus I did not break "the bone" over again, but, aided by one of Kolbe's shoes, I succeeded in enabling the child to walk with ease and comfort.

Yours,
W. R. D. BLACKWOOD.

Sept. 12, 1874.

TO THE EDITOR OF THE PHILADELPHIA MEDICAL TIMES:

IN the *Medical Times* of August 29, 1874, Dr. James D. McGaughey gives the details of a case of infantile convulsions successfully treated by chloral hydrate after numerous other remedies had been tried without avail. On the 26th day of July, 1874, I made use of chloral in a case of convulsions occurring in a child five years of age, but it failed to give any relief. I had never heard of its being used in such cases, but thought it would prove very beneficial. I gave it a fair trial, and it failed, where chloroform acted finely.

Yours truly,
T. J. TURPIN, M.D.

FORKLAND, ALA., Sept. 9, 1874.

OFFICIAL LIST

OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U.S. ARMY, FROM SEPTEMBER 15 TO SEPTEMBER 21, 1874, INCLUSIVE.

WRIGHT, J. P., SURGEON.—Assigned to duty as Chief Medical Officer, District of New Mexico. S. O. 96, District of New Mexico, September 7, 1874.

HUNTINGTON, D. L., ASSISTANT-SURGEON.—Relieved from duty in Department of the Columbia, and, in addition to his duty as member of Medical Examining Board, to report in person to the Commanding General, Department of California, for assignment to duty. S. O. 203, A. G. O., September 6, 1874.

BROOKE, JNO., ASSISTANT-SURGEON.—Assigned to duty at Fort Cape Disappointment, W. T. S. O. 124, Department of the Columbia, September 4, 1874.

KINSMAN, J. H., ASSISTANT-SURGEON.—Leave of absence extended to November 1, 1874. S. O. 205, A. G. O., September 18, 1874.

LAUDERDALE, J. V., ASSISTANT-SURGEON.—Assigned to duty at Fort Wingate, New Mexico. S. O. 143, Department of the Missouri, September 10, 1874.

EWEN, C., ASSISTANT-SURGEON.—Granted leave of absence for twenty days from October 1, 1874, on condition that he furnish, at his own expense, a suitable substitute during his absence. S. O. 135, Department of the Gulf, September 9, 1874.

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